

# New Sexual Repertoires: Enhancing Sexual Satisfaction for Men Following Non-traumatic Spinal Cord Injury

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**Abstract** Sexuality is an important priority for people following spinal cord damage (SCD), due to the impact on sensory and motor function, including paralysis and associated mobility restrictions. Men living with SCD report difficulty in achieving and maintaining erection, impaired capacity for orgasm (with or without ejaculation), and increased likelihood of retrograde ejaculation as significant challenges for sexuality. The implications of these issues for men following non-traumatic SCD (spinal cord dysfunction or SCDys) has not been examined. Drawing on interviews with eight heterosexual men following SCDys, this paper seeks to examine the factors that impact sexual satisfaction. Due to a focus on coitus and the significance of erectile function in this, most participants reported dissatisfaction with their sexuality post-SCD. However, this could be overcome through expanding their sexual repertoires. Through providing information and education about non-coitus focused expressions of sexuality, there is scope for sexual rehabilitation services to significantly increase the quality of life of men after SCDys.

**Keywords** Rehabilitation · Sexuality · Sexual behavior · Spinal cord diseases · Australia

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## Introduction

Sexuality is an important priority for people following spinal cord damage (SCD) [2, 35], due to the profound impact on sensory and motor function that occurs below the level of injury. These include paralysis and associated mobility restriction, bladder and bowel incontinence, loss of sensation, and altered genital and sexual function [20]. Regarding sexuality changes following SCD, for men there are potential impacts on their ability to achieve or maintain erection, their capacity to orgasm with or without ejaculation, while simultaneously increasing the likelihood of retrograde ejaculation [5]. Due to this latter effect, fertility may therefore also be impacted. Principally, the sexual functioning of men with SCD is determined by the level and completeness of injury [7]; the etiology of the injury thus plays an important role in shaping sexual functioning following SCD.

To date, the overwhelming majority of research on sexuality post-SCD has focused on people who have sustained a traumatic spinal cord injury (SCI) [1, 7, 8], arising from an accident or injury. However, in developed countries, it is reported that non-traumatic SCD, referred to here as spinal cord dysfunctions (SCDys), is more common than traumatic SCI [24, 23]. SCDys can be caused by a wide range of medical conditions, which are frequently age-related in nature [24], with the most common being degenerative spinal conditions, cancer, infections and vascular conditions [19]. There are important demographic differences between people with traumatic SCI and those with non-traumatic SCDys, with SCDys tending to have a more even gender distribution and older age [24, 23]. Despite SCDys being more common than SCI, until very recently there were no studies that reported separately on sexuality in people with SCDys [21, 22]. We argue for a greater need to specifically focus on the sexuality of people following SCDys, both because of its higher incidence (compared to SCI) and the projected future increases due to population ageing. In this study, we focus exclusively on men with SCDys to understand how they experience sexuality. Drawing on their insights, we aim to identify the factors that shaped and men's sexual satisfaction, including the influence of SCDys on their understandings of sexuality, barriers or challenges encountered, and the strategies they used to achieve pleasure.

## Psychosocial Considerations for Understanding Sexuality Following SCDys

The confluence of ageing and disability also plays a significant role in understanding how SCDys impacts sexuality, including who has the right to sexual personhood (see [30]). Indeed, disability scholars [32, 38] have argued that socially normative understandings portray sexuality as being the domain of those who fulfil a limited set of criteria: youthful, heterosexual, adult, and able-bodied people. In consequence, people who do not conform to these norms—including men and women following SCDys—are rendered asexual and lacking the capacity for sexual satisfaction [17, 18, 29]. This construction has significant impacts on the lives of people living with disability, for whom sexuality functions at multiple affective and relational levels. Sexuality is a fundamental human right, a marker of personhood and citizenship [14, 32, 42]. At the same time, sexuality is an important component of belonging, providing a means of connection with another (or others) that can buffer against the psychosocial impacts (including to social identity and self-esteem) of

disablement [12, 15, 32, 33, 39]. In this way, sexuality can enhance wellbeing and contribute to quality of life [22, 40].

Even following a life-changing health event such as SCDys, the desire for sexual expression and intimacy persists for most people [13, 36, 37], and the recovery of sexual function is one of the two highest priorities of Americans following SCD [2]. For the most part, however, barriers to sexuality and sexual satisfaction in the context of SCDys are more strongly social in nature and less related to physical impairments [27]. People with SCDys experience desire and pleasure, although their ability to express this sexually is impeded through lack of knowledge, skills, or repertoire that supports this [29]. This is not entirely surprising: ageing, with or without disability, shapes the range of behaviors and practices (which we and others term ‘sexual repertoire’ [10, 11, 25, 41] that an individual can draw upon in realizing their sexuality. A person’s sexual repertoire changes over the life course, including in response to bodily impairments. Herbenick et al. [10] community-based research on (predominantly heterosexual) sexual practices across the lifespan demonstrated that participation in sexual activities, regardless of type, generally declines with ageing. This was especially notable among those aged 50 years and above, which may reflect increasing health problems and partner loss. From the age of 40 onwards, men reported either solo masturbation or vaginal intercourse as their main sexual activities [25]; few received, and fewer still performed, oral sex, suggesting not only a slowing down of sexual activities overall but a simultaneous narrowing of their sexual repertoires.

Narrow constructions of sexuality are generated both by the individual and through sexual rehabilitation services (SRS), which typically focus on reproductive capacity and erectile functioning rather than pleasure [26]. The emphasis on the performative aspects of sex, in which ability to achieve and maintain an erection is central, has been well documented at an individual level (e.g. [16, 27, 34]). However, by remaining focused on penetration and coitus, SRS may compromise quality of life—the opposite of the desired effect [6]. In this paper, we seek to examine men’s experiences of sexuality and sexual satisfaction following SCDys, including in their encounters with SRS. Drawing on these findings, we consider the ways in which new possibilities may become available for SRS, e.g. by supporting people to diversify or expand their sexual repertoire.

## Methods

The data were drawn from a larger mixed-methods study examining sexuality for men and women following SCDys [21, 22, 29]. The qualitative component employed an exploratory, iterative thematic analysis study design [3] in which we sought to explore the psychosocial experience of sexuality for people who had undergone rehabilitation for SCDys. This paper focuses on the experiences of men, and we have elsewhere reported on those of women [29]. Potential participants were recruited through notices placed in the waiting areas of the participating hospital’s outpatient spinal review clinic, via letters of invitation sent to people who had attended that clinic in the past 3 years, and through newsletter advertisements and the social media platforms of the State-wide organization that supports people with spinal cord damage. Face-to-face semi-structured interviews lasting 60–90 min in duration were conducted with eight men, aged 48–69 (median 59 years, interquartile range 55–67 years), living in the greater metropolitan area of Melbourne, Australia (Table 1). This sample size was deemed sufficient based on the principle of informational redundancy, where no new data were revealed in subsequent interviews

**Table 1** Study sample characteristics

| Marital status   | N | Reason for SCDys                 | N |
|------------------|---|----------------------------------|---|
| Married          | 5 | Spinal cord hemorrhage           | 1 |
| Partnered        | 2 | Spinal cancer related            | 2 |
| Divorced         | 1 | Laminectomy complications        | 1 |
|                  |   | 'Nerve damage'; strain over time | 1 |
|                  |   | Lower motor lesion               | 1 |
|                  |   | Undisclosed                      | 2 |
| Time since SCDys | N | Level/type of SCDys              | N |
| 5 or fewer years | 2 | Incomplete paraplegia            | 6 |
| 6–10 years       | 3 | Incomplete tetraplegia           | 2 |
| 11–15 years      | 1 |                                  |   |
| 20 + years       | 2 |                                  |   |

[9, 28] and no further recruitment therefore occurred. All interviews were conducted between September 2013 and September 2014 by researchers trained in qualitative research methods.

Interviews commenced by inviting participants to give an account of their SCDys, and to reflect on how it had affected them. Specific questions were concerned with participants' experience of sexuality and how their SCDys had impacted on their sexual practices, including in terms of their intimate relationships, ideas of giving and receiving pleasure, as well as factors directly related to their sexual expression. Further questions considered their experiences in rehabilitation relating to sexuality and sexuality education about the consequences of SCDys (see [22]), as well as sexuality issues during subsequent community reintegration. Additional prompting questions were used where appropriate, in order to elaborate on the responses given. All interviews were audio-recorded with participants' permission, and were subsequently transcribed verbatim. Pseudonyms were used throughout analysis and dissemination in order to maintain privacy. Approval for this research was given by one [withheld] Hospital and [withheld] one University Human Research Ethics Committees.

## Analysis

Braun and Clarke's [3, 4] iterative thematic analysis strategy was used to guide the six-stage data analysis. Iteration was supported by undertaking a preliminary analysis following each interview, which not only informed the question schedule for subsequent interviews but also guided the broader analysis process. Data analysis proceeded as follows: *initial familiarization with the data (stage 1)* occurred through the transcribing process and repeated readings of the transcripts. Next, codes were *formed and categorized (stage 2)* into potential overarching themes and sub-themes using an inductive analysis; some deductive themes were also identified based on the researchers' clinical expertise and the literature reviewed. Codes were then *identified as themes (stage 3)* by noting the frequency with which each code occurred and/or the extent to which it related to the research questions. These *themes were subsequently refined (stage 4)* and data extracts reviewed to ensure that they adequately reflected the relevant themes. The final two stages

involved *defining* and *naming* (*stage 5*) each theme in the context of the overall data, which shaped the reporting process (*stage 6*). To ensure rigor, the coding framework was reviewed by the first and second authors at the commencement and towards the end of the data analysis phase.

## Results

For all participants, SCDys resulted in an incomplete SCD, and they therefore retained some level of mobility (including ability to walk with a frame). Many also reported functional gains over time following their SCDys, although these gains were counterbalanced by losses at other points in time for some. These factors were reflected in their sexual-related experiences, particularly in that they enabled the retention of some level of sensation and functioning.

### Changes in Sexual Functioning

Physical and physiological aspects of sexual functioning were, without exception, profoundly changed for all participants by SCDys, and involved some combination of: lowered libido; reduced response to external stimuli; an inability to get or to maintain an erection ('erectile dysfunction'); an inability to achieve a 'full' erection; challenges in achieving orgasm, particularly in terms of their ability to ejaculate; when orgasm did occur, reduction in the depth and satisfaction associated with orgasm; and in the possible positions or activities available (sexual repertoire). For most participants, several such effects were noticed, as Shane explained:

For quite a long time, I was unable to get an erection. ... I've had some... 'penile shrinkage'. I found my penis just didn't seem to be what it was... I was not able to get an erection at all, for quite a long time. And then... over a period of time, I found that I was getting some reaction to given stimulus. And that seemed to improve very slowly... so I was able to get an erection to some extent. It's never been a full erection, and it's never been full for a sufficient [time] to have sexual activity.

Unsurprisingly given these effects, all study participants identified a shift in their experience and understanding of sexuality following the onset of their SCDys. The most notable of these was the shift from sexuality being a primarily physical—and physiological—activity, to having a much more emotional or psychological component. Jürgen, for example, experienced penile bleeding during his attempts at intercourse in the months following SCDys; although this was readily explained—being due to the catheter—it had an impact on his sexuality. Although he continued to feel sexual desire, because this was unable to be fully realized through orgasm, he did not actively seek to engage in any sexual activity:

[My sexuality] has changed, because I know I cannot come any more. That's why. It changes you, and you become only half interested in that. I was gonna do it with my wife, just for her, and she had some satisfaction, not really [satisfaction] for me. Because I know I couldn't [orgasm], and that's it. In your head, you know that. But you do get aroused. I know I mean, it's still there. That doesn't go, that hasn't gone away.

For many participants, the disconnection between their desires and their bodily response was frustrating, as Nathan explained:

The sexual thing is frustrating because I do feel the same inside. It's like the running, I can't, my brain just doesn't go there anymore. Even though in my brain, I'm still the same person that can run 1:59 [minutes] for 800 [meters], it now takes me 17 min to walk 600 m. It's the same sort of thing. You're still a sexual person, you still have a need and a feeling for sexual intimacy but then your body lets you down, and that lets your partner down.

Similar accounts were provided by other participants, regardless of the level of their injury. Shane explained how his feelings—including his sense of himself as a man—were unchanged despite changes in his functioning:

I haven't changed that at all. Nothing there in that way seems to have changed. I still consider [myself] to have the normal masculine feelings. I think everything is normal to an extent, until it reaches the actual erections. And the fun that comes with it. But I don't see myself as being any less masculine as a result of where I'm at.

## The Buffering Effect of Relationships

Relationships appeared to play an important role for some participants in shaping how they perceived their identity, sexually-speaking, following SCDys. Both Jürgen and Shane (discussed above) had been married for several decades, and neither reported significant problems with how they saw themselves as men following the limitations of SCDys. They explained how their long-term relationships provided a sense of continuity against which they could manage their sexuality despite paralysis. This was especially notable for Don, who explained how his relationship of over four decades had allowed him to maintain his perception of himself, including in terms of masculinity, even though he hadn't had penetrative intercourse (what he considered 'sex') in a long time:

It [SCDys] has only affected the bed experiences. Not too much the other roles. I still mow the lawns, and I can do certain things which I always used to do... [Before, sex] was all over the place, [we'd have it] sometimes three times a week, sometimes once every three weeks, depending on how busy we both were... Physically, I'd like to be able to carry on like I used to. Obviously I can't. So what's happening there is that my thinking about what I can and can't do has changed... I see myself the same, except that I'm limited by my capabilities.

Relationships did not always provide a buffer, and instead created a new source of anxiety for some participants. This was especially notable for men who were not in a relationship or in a new relationship. Jason, for example, felt that his masculinity was compromised by SCDys. To redress this, he sought out sexual encounters, despite not experiencing a great deal of physical pleasure from these:

Well, the function, the malehood, there is nil. Zip. So that's changed... I've had sexual contact. I do everything bar sexual intercourse. I still have relationships in that sense, [in] that I still get involved with women. ... In recent times, with [my] testosterone being low, I haven't had the desire to [have intercourse]... All I've got left is the enjoyment of the conquest of getting the woman back here, wining, dining

and off to the bedroom. When you get to the bedroom, you feel a bit let down. I feel a bit let down.

Through the pursuit of women, Jason used his sexuality as a way of coming to terms with his SCDys. He interpreted his ability to get women to agree to go home with him as a marker of his success as a man, rather than either his own or his partner's pleasure.

Although Dave was similar in terms of how he used physical attraction as a marker of his masculine sexuality, he believed that his SCDys placed him at an advantage in new relationships. His partner felt threatened by sexually aggressive men and, because of his partial paralysis, Dave had adopted a more consciously passive role: "I don't use sex as a weapon or anything like that as other men do". Instead, he highlighted his demeanor as a key factor in his sexuality: "[Her previous encounters were to] just throw her on the bed and she just got fucked, [but, I don't do that], I'm a gentleman". His inability to get an erection was a benefit in this respect, as a key element of sexuality for Dave was the pragmatic acquisition of a new sexual repertoire, largely in terms of the activities in which he could engage: "It's all pretty good but you've got to remember I'm paralyzed, so I can't do a lot. I'm doing quite well, I'm the best she's had. And it's a pity that I can't get an erection, but that's life."

### **Developing a New Sexual Repertoire**

Participants in our study emphasized how SCDys had prompted them to develop new ways of understanding their sexuality. Sexuality was seen as an integral part of well-functioning relationships, providing a means to deal with the challenges associated with everyday life, which could be made especially difficult by SCDys. All participants saw sexuality as something they actively wanted to participate in—and as something they were prepared to work towards:

[Sex] it's fantastic. It's the icing on the cake. Cake's pretty boring without icing... It's like dry toast. Marriage without sex is like dried toast... without a little bit of butter or a bit of jam. That's the sex in the marriage. And the cake is pretty boring without the icing on the cake. The sex is the bit on top that makes it taste good, and so without it, you're chewing cardboard all the time. (Nathan).

Given the embodied limitations arising from SCDys, participants actively sought to develop and deploy a more diverse sexual repertoire. This was a learning process, as they had previously been focused on intercourse as their primary (or only) expression of sexuality. Indeed, when we asked participants about their sexuality, they almost exclusively discussed coitus. Don's account (above) exemplified this, where he explained that he had not had sex in years, but then went on to explain how he regularly engaged in masturbation (of him, by his wife) and cunnilingus. All but one participant were sexually active, and few were able to engage in penetrative sexual intercourse. Those that were discussed how they were no longer able to be active in sexual encounters, and found the possible positions for intercourse were largely limited to a face-to-face position (the so-called missionary position):

I can actually have sex with her but its pretty difficult as a paraplegic. My core is affected too badly. And I have no chance if I'm lying on the bottom. I have to be on top to have enough physical muscle to actually make that happen. It doesn't last very long, my lungs die within a couple of minutes. But at least we try. Usually it's just sex play. (Gus)

Although participants were well versed in the potential of medication and technologies to support them achieving coitus (i.e. frequent references to oral prostaglandin inhibitors, intracavernosal injection of vasoactive medications into the corpus cavernosum, vacuum constriction devices), there were frequent barriers to use. These barriers included: cost; difficulty of use; limited efficacy; or unpleasant side-effects:

Every now and again, I can get an erection. I've gotta use Viagra or some other substances like that. But not any of them are satisfactory, because they're not strong enough, and some make me sick or give me diarrhea. (Andrew)

In response, most participants identified the need to learn new ways of giving pleasure and receiving satisfaction. The shift in focus to more diverse forms of sexuality suggested by participants' accounts necessitated a redefinition of the idea of sexuality itself, one which was concerned less with their own pleasure and release, and more with that of their partner. Intimacy was an essential component of this:

As a youngster, 'sexuality' meant sewing your wild oats as much as you can, as often as you can... Over the years, and my involvement with marriage enrichment programs, has certainly [led to my belief that] sexuality is a package which includes your attitudes and includes a process of intimacy, and includes the sexual act. It's become sort of a whole bundle of things for me, as opposed to when I was young [where] it was a sex act: Having sex. (Shane)

An important part of intimacy was the shift in focus away from their own achievement of orgasm to a greater emphasis placed on the satisfaction obtained through the process of giving their partner pleasure. Dave achieved this in multiple ways:

We are sexually intimate, assuming that word sex means having intercourse [but] we're sexual in other ways too... If I touch her, I can bring her to orgasm. I can bring her to orgasm talking to her. Get her wet, just going for the erogenous zones and saying a few words. I'm 59, for God's sake, I picked up a few tricks along the way. The fact I can't get it up, that's no problem. She has fun sticking my floppy dick in her vagina, so it's good. If that's what God's given me, at least I've got something.

For Jason, the giving of pleasure was achieved through the use of a mechanical sex aid, something essential to his sexual encounters given that he had no feeling around his genital area: "I just don't have sexual intercourse. I take a 'friend' with me into bed. So I have a little battery-operated extension." This idea of participating in sexual activity as an expression of affection in which a level of satisfaction could be attained was also identified by Shane. He highlighted the significance of the type of pleasure attained through giving satisfaction to another, even though he was not personally satisfied sexually:

It's more for her. I'm conscious of the fact that she probably needs a sexual relationship. And so, I guess this is why I pursue it, 'cause if I were left on my own, I haven't even masturbated or attempted to masturbate on my own, and I've no inclination to... I do enjoy the sexual encounter, the intimacy of it... being together physically and holding each other, cuddling that goes with it. It's become more than the actual act of penetration.

To most successfully and reliably maximize their own sexual satisfaction, participants discussed how they chose to focus on other forms of sexual expression, and other parts of the sexual encounter. This took diverse forms: from Jason's pursuit in the lead-up to sexual encounters to Gus's emphasis on the playful intimacy around sexual encounters:



Of course paraplegia affects your sexual function. So, because I feel everything, I still function sexually. But [SCDys] also means I have erectile dysfunction and stuff, the obvious things. [But] I always enjoyed sex play as much as the act of sex, so it didn't actually bother me that much.

Implicit in this was the need to give pleasure to their partner, which was facilitated by other expressions of sexuality. Most notably, foreplay, massage, masturbation, and oral sex became key components of their sexual repertoire post-SCDys. In particular, masturbation was not perceived as something that participants engaged in on their own, but rather during encounters with a partner—possibly because, at least in part, participants experienced significantly lowered libidos post-SCDys. For Don, a diverse repertoire was necessary as he had very little hand function:

I'd never done oral sex on a woman before, but because of the spinal cord damage, I thought I better venture there and see what happened. And she liked it [so] I've adapted... Sometimes I can get an erection, well, a partial erection, sometimes I can't... I have a problem with ejaculation, when I could [have coitus] and it didn't hurt, I could give her satisfaction, but I couldn't get satisfaction. So she would try to masturbate me, because I couldn't, and sometimes it would be successful and sometimes it wouldn't... All our married life, she wouldn't even touch that area, but after I was allowed to come back home, we figured out other ways of communicating with each other sexually. I hadn't been sexually satisfied and [so] she tried masturbation.

In addition to changes in repertoire, the timing of sexuality was changed after the onset of SCDys, whereby sexual expression was something that required planning and more time than previously. Gus highlighted how the spontaneity of sexuality had gone with SCDys, and thus sex was something that required a fair bit of planning and time:

I'm more interested in affection than I am in sex, always have been. Sex was always fine, and in the old days, if my wife didn't feel like having sex, we'd probably just have quick sex which was alright, she didn't mind doing that. And then occasionally we'd have long, lovemaking sort of sex. But of course, having paraplegia, everything has to be slow and, I don't know, it's just not the same as it was, which kind of sucks.

While this was problematic for intercourse, Gus became much more interested in massage as a form of sexual expression post-SCDys; taking time and being slow were advantageous to this type of sexuality:

I'm more about affection, I love massages. I don't know, bit of a romantic and stuff. My wife's... loving is acts of service [e.g. keeping house, caring for him], so she tries to love me through acts of service, whereas my love language is affection and quality time.

Through refocussing his understanding of sexual pleasure and satisfaction, Gus was able to translate some of the challenges of SCDys into positive attributes through which he could express his sexuality.

### **A Role for Sexual Rehabilitation?**

For the most part, participants' more recently acquired sexual repertoires were not covered during any of the rehabilitation services. Such services focused on bladder and bowel

management, and the only sexuality-related information provided was concerned with the use of medication and technological aids in achieving orgasm. Yet, as illustrated here, most men in our study did not find a great deal of pleasure through coitus, even where they could achieve an orgasm. Instead they suggested significant need for sexual rehabilitation services (SRS): “I would put a lot of support in that area [sexuality]. I don’t think there’s enough on that area” (Jason). Few participants had received specific SRS at any point since their SCDys, and there was little consistency across participants in terms of who had delivered the information. Those who had received some information described it as incorrect or felt it was delivered in an insulting manner:

When I became an L1, some doctor gave me a speech with my wife, and he said I had to take on a female role, almost like a homosexual did. So I told him to piss off. The thing is, I thought that was a stupid perspective... I’m quite relaxed for a bloke, but when he said I’ve gotta become the female in the relationship, like a homosexual relationship, I’m like going, that’s bullshit mate. I think you probably should leave. I think it’s inappropriate... I just thought that was an inappropriate way to present sexuality to a couple. (Nathan)

In other instances, the conveying of information about sexuality occurred only at a superficial level, leaving the participant with no useful strategies to enhance their sexuality-related quality of life:

There were generalizations about the fact that it’s a reaction to my nerves and damage has been done to my nerves, that sort of thing. Other than that, there was no in-depth discussion about it, conversation about [sexuality], anything like that. And my view is that if information was gonna come from anywhere, it would come from [the surgeon]. (Shane)

One of the challenges experienced by participants who had been given misleading or inaccurate information about sexuality post-SCDys related to their disappointment, as Dave explained:

There was a sexual counsellor who I went to, and she said “do you wanna try [Viagra]?” And I turned around and said “No”. But she led me to believe that, if I did get a partner and if I did have sex... that with Viagra, I’d be able to get an erection and that I’d feel it from the waist up. Load of bullshit in my case.

In each of the above quotes, participants were left no better off, and sometimes poorer, after having received SRS. More common were experiences like Jason’s: in the 5 years since his SCDys, the study interview was the first time in which he had directly discussed sexuality. Part of this was driven by participants: a rehabilitation team member had informed them of opportunities to discuss sexuality, but they had not taken up these invitations.

Given the shortcomings in information delivery, participants had clear ideas about who should deliver SRS, what it could and should cover, and in what format that information should be delivered (see [22]). Participants overwhelmingly preferred for SRS to come from the medical staff, rather than allied health staff: “[Medical staff] should be working on it, because they’re the ones that would have direct access to patients” (Dave).

In terms of content, participants held differing perspectives about the content of SRS. Basic information about the impact of SCDys was an assumed minimum, as was information on the various medical technologies (Viagra, injections, etc.) available. However, blanket information was seen to have limited utility: participants recognized the need for

SRS to respond to differing levels of injury: “You’ve got to diversify for those individual groups... Tell people, this may work or it may not work. You may have feelings, or may not. Don’t lie to people” (Shane). Furthermore, some types of content were associated with particular forms of delivery. This was evident in the preference for group discussions in which people would be given opportunities to share their stories of sexuality and, importantly, to discuss strategies to enhance their own and their partners’ satisfaction. An attraction of such group discussions was that they provided a medium through which participants could draw upon others’ accounts in order to identify their own problems:

[Start by] see[ing] where the need is, having people like myself and others talking with others, and asking the questions that we wanna ask to each other. Finding out how I deal with it, how would you deal with it, how does he deal with it? Imagine then how it would help. Helping each other, sharing answers... There are all these blanks in there [in terms of sexual experience after SCDys], and... I need to fill those blanks in. (Jason)

The goal of such groups would be to complement, rather than replace, SRS: “I can only tell him... Even [with SCDys], you still enjoy the sex but you can’t ejaculate” (Jurgen). Expanding sexual repertoires would be an important part of these group discussions, as Don identified:

You could place them in a group [discussion] session, but it would have to be a little bit jocular so that every person in the group session could bounce ideas off each other, and the person leading it could ask things like “well... how many of you have ever tried oral sex?” Some people with spinal cord injury and maybe other physical injuries are pretty blunt and open about it... [It would be just about] getting the general group to bounce ideas off each other at the same time. That’s the way I think I’d try to tackle that situation... Mind you, before the discussion came up, I would be inclined to make a disclosure that... anyone can walk away from [the group if they wish].

Other participants preferred less direct ways of engaging with support, such as through online support or information (including YouTube) or through a DVD provided by SRS staff. These would also highlight the importance of an expanded sexual repertoire:

It would be good if someone could make a DVD, even if they did it in cartoon format... For the partners, it would say, this is how you could approach your partner who has erectile dysfunction and can’t ejaculate quickly. And [it could give] ideas on keeping the spice in the relationship, rather than it falling apart because of that issue... I don’t like reading material, I’d rather view something. It doesn’t have to be real people, [it could be] even somebody just talking about [it]. Suggestions. You know, the thing is [that] there are so many great tricks to erotic massage that people don’t think of. If you and your partner are showering and everything like that. The mouth is a really good instrument for being erotic, starting with toes and stuff. As long as everything’s clean you know. And within a trusted relationship, I would say that oral sex play is a lot more fun than real sex play. Most people just do the obvious... I think it’s just [about] suggesting to people rather than having to discuss it. (Gus)

Through having multiple forms and types of information available, including that which gives strategies for diversifying sexual repertoires, SRS can better support their patients to achieve sexual satisfaction and, through this, enhance their quality of life.

## Discussion

Participants in the current study emphasized the quality of relationships as central to their experiences of sexuality: all explained that the SCDys had impacted their relationships, although how this occurred varied in nature. For the most part, participants felt unprepared for these new forms of sexual expression and pleasure-making, due to having a limited range of sexual activities and practices, or ‘sexual repertoire’. At the same time, however, they recognised the importance of sexuality in their lives and for their wellbeing, and actively identified their desire to improve this aspect of their lives, as suggested by participants’ requests for greater sexuality-related education. This finding echoes [27] call for more sexuality-related education, as a first step in making sexuality—and thus the attainment of a fulfilling life—accessible to people following any SCI.

Throughout their experiences of SCDys, and contrary to their own desires, participants received messages that their sexuality was (or should be) no longer a priority. This had significant impact on their identity. The limited support on sexuality received during their recovery following SCDys impacted not only upon their sexual satisfaction following SCDys, but more importantly on their sense of their own masculinity. All participants in our study described how rehabilitation had focused more on the practical aspects of bodily management related to SCDys—erectile, bowel and bladder management—with less attention given to how to negotiate their changed sexuality, whether it was expressed within a relationship or individually. Participants highlighted their desire for more sexual rehabilitation, particularly through peer- and online-support. They identified five specific ideas for improvement of sexual rehabilitation services, described below.

Participants first wished for structured and consistent delivery of information for SRS, thus preferring a formal SRS program to ensure that all people received the same basic information following SCDys, and could thus equally realize their right to sexuality [32, 38]. Second, medical staff were identified as the appropriate professionals for the delivery of SRS. This is because they had the physiological knowledge, as well as the clinical access to patients. Third, in terms of content, participants all believed that at its most basic, SRS should communicate accurate and timely information about the functional and emotional impact of SCDys, as well as on the various interventions and technologies that they could access. Education and information on sexual repertoire—including knowledge of what positions were possible and safe (not further compromising their health or functional status)—was an essential part of this. Fourth, beyond this ‘basic’ information, there was a need for tailored SRS which responded to different levels of SCDys. Finally, YouTube or other online media and group sessions were the preferred mode of SRS delivery. This latter point appeared to be gendered, and our research with women indicates that these forms of delivery are what they actively do not want [22].

The study findings highlight opportunities for sexual rehabilitation services to better promote sexuality for men following SCDys. In particular, more emphasis on psychosocial barriers and the actual relationships is required [22, 27], as well as information about how different sexual techniques can enhance sexuality. In this way, this essential component of quality of life following SCDys can be achieved.

A major strength of this project is that it is the first, to our knowledge, that focuses specifically on the sexuality issues of men with non-traumatic SCDys. Furthermore, we have proposed recommendations for spinal rehabilitation services to guide improvements in how they address the sexuality education needs of men with SCDys that build on our previous work in this area [21, 22, 29]. Limitations of the study include the small sample

size; however, as this was a qualitative study, we deemed the number of participants to be appropriate as it became apparent during analysis that informational redundancy was achieved [28]. The qualitative nature of this research necessarily means that the views of the men interviewed in the current study may not be generalizable to all men with SCDys in countries outside of Australia. Our exclusively heterosexual sample should also be noted, and further research should be undertaken on the experiences of homosexual or bisexual men which may be considerably different, as may their preferences for SRS (as noted by [31]).

In conclusion, our findings provide important insights into the importance of sexuality for men following non-traumatic spinal cord injury. Due to population ageing and increases in particular health conditions, SCDys is likely to increase in the future and thus will become increasingly important population for spinal rehabilitation unit. Drawing from our findings, we provide suggestions for the nature and content of sexual rehabilitation services, which have a thus-far unrealized potential to enhance life satisfaction and fulfilment for people following non-traumatic spinal cord injury.

### Compliance with Ethical Standards

**Conflicts of interest** Narelle Warren and Cameron Redpath declares that they have no conflicts of interest. Peter New is Rehabilitation Consultant and Head of Spinal Rehabilitation at Caulfield Hospital.

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