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Sexuality and rehabilitation needs following traumatic motor vehicle injuries: client and clinician perspectives

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Abstract

Aim and Background: Sexuality is an important aspect of being human, and is affected for people following trauma injuries. This study aimed to examine how sexuality is addressed during rehabilitation following traumatic motor vehicle injuries and to identify barriers to provision of this service. **Methods**: A convergent mixed methods approach with concurrent timing and an independent level of interaction was used to examine the perspectives and experiences of clients and clinicians towards addressing sexuality. A questionnaire was completed by eligible clients (n = 21) and semi-structured interviews (n = 10) were conducted with clinicians. Questionnaire data were analysed using descriptive statistics (frequency, means and SD) to provide an outline of sociodemographic and injury related information. Interview data from clinicians were analysed thematically. **Results:** Sexuality was described as being impacted for over half of clients. One third reported that sexuality was addressed as part of their rehabilitation. Core themes identified from the interviews of clinicians included: (1) 'whole person' approach, (2) timing, delivery and responsibility of discussions, (3) culture and comfort, and (4) future tools and skill sets. **Conclusion:** Clinicians and clients agreed that sexuality was important but inadequately addressed during rehabilitation. Clinicians were lacking comfort, training and resources to address sexuality consistently with clients. Sexuality should be addressed at multiple stages of rehabilitation to grant service-users the option for these discussions to occur.

Keywords: Rehabilitation, Sexuality, Trauma Injuries

Introduction

Physical or psychological changes resulting from trauma injuries may significantly effect a person's sexuality (Connell et al., 2014). Sexuality is a complex area, involving many more facets, than solely sexual intercourse (Ponsford et al., 2013). The World Health Organisation (2019) describes sexuality as: "a central aspect of being human throughout life and encompasses sex, gender identities and roles, sexual orientation, eroticism, pleasure, intimacy and reproduction. Sexuality is experienced and expressed in thoughts, fantasies, desires, beliefs, attitudes, values, behaviours, practices, roles and relationships. Sexuality is influenced by the "interaction of biological, psychological, social, economic, political, cultural, ethical, legal, historical, religious and spiritual factors" (World Health Organisation, 2019).

Impacts of serious motor vehicle injuries (MVIs), including traumatic brain injury (TBI), spinal cord injury (SCI), amputations and burns, on sexuality may include changes in sex drive, sensation, mobility, sexual relationships, pain, self-image and psychological state (Hanks et al., 2013; Simpson et al., 2006). Injury type impacts sexuality uniquely. Burns may cause decreased range of motion (Parrott & Esmail, 2010) and self-esteem from scarring (Oster & Sveen, 2015). TBI may result in hormonal, reproductive, cognitive and emotional changes, spasticity, decreased balance and slow or in-coordinated movements (New Zealand Guidelines Group, 2019; Sander & Maestas, 2014). SCI can cause changes in bladder and bowel function, orgasm, ejaculation, erectile function and vaginal lubrication (Consortium for Spinal Cord Medicine, 2010; Lombardi et al., 2010). Individuals with amputation may have trouble with caressing or positioning due to missing part of a limb (Geertzen et al., 2009).

Despite the impact of trauma injuries on sexuality, disability does not alter one's need for intimacy and affection (Northcott & Chard, 2000). Rehabilitation is defined as assisting clients to achieve and maintain optimal functioning (World Health Organisation, 2019). Sexuality is an important part of rehabilitation, with studies showing that sexual adjustment can be a pivotal part of rehabilitation success (Haboubi & Lincoln, 2003). Nonetheless sexuality is the least discussed issue in rehabilitation settings (Schmitz & Finkelstein, 2010). Many health professionals display positive attitudes towards addressing sexuality with clients, however report a lack of comfort and knowledge in implementing these discussions (Cesnik & Zerbini, 2017; Simpson, 2001).

To date, studies have shown that sexuality rehabilitation for many injury types is lacking. To include sexuality in rehabilitation health professionals need to be informed of their role, what should be provided, and resources that might be useful (Marier Deschênes, et al., 2019). Current research relating to sexuality as part of rehabilitation for these cohorts includes varying definitions of sexuality and small sample sizes (Fritz et al., 2015). Further research is required amongst all people with serious trauma injuries to develop strategies to address sexuality in rehabilitation and increase quality of life (Connell et al., 2014).

Aims

Despite an increasing body of knowledge in relation to sexuality and disability, there is a lack of research describing clinician and client perspectives in addressing sexuality in rehabilitation for people with traumatic MVIs. The aims of this study were to: 1) examine perspectives and experiences of clients with traumatic MVIs to how sexuality is addressed in rehabilitation and 2) explore health professionals knowledge, comfort levels and attitudes towards addressing sexuality with clients post traumatic MVIs.

Ethical approval

The project was approved by the Southern Adelaide Local Health Network Ethics Committee (HREC/17/SAC/239). Informed consent was obtained from all individual participants included in the study. All procedures performed in this study were in accordance with the ethical standards of the institutional and/or national research committee and with the 1975 Helsinki declaration.

Methods

Study design

In order to examine the perspectives and experiences of clients and clinicians towards addressing sexuality following traumatic MVI's, a convergent mixed methods approach with concurrent timing and an independent level of interaction was used. Completion of a questionnaire for participant clients and semi-structured interviews of participant clinicians were used to address the study aims.

Setting

In South Australia, serious injuries resulting from motor vehicle accidents occur approximately every nine days (Parliament of South Australia, 2013). The Lifetime Support Authority (LSA) provides treatment, care and support for those who have sustained eligible injuries including spinal cord injury (SCI), traumatic brain injury (TBI), blindness, amputation, brachial plexus injury and burns, regardless of fault (Lifetime Support Authority, 2022). The LSA is projected to include 300 clients within the next five years.

The LSA provides client case management provided by clinicians (service planners), all of whom are allied health professionals. Service provision is outsourced, engaging a range of service providers from the public and private sector to provide treatment, care and

support to clients. Clinicians are commonly involved in a client's entire rehabilitation journey, utilising a person-centred service delivery model (Lifetime Support Authority, 2022).

Data collection

Participants: Clients

Participant clients included in the study were those who had sustained SCI, TBI, amputation, Brachial Plexus Injury (BPI) or burns. Participant clients were considered eligible if they were (a) over 18 years old, and (b) living in a community setting. Clients were excluded if they were (a) in acute/inpatient rehabilitation, (b) living overseas, or (c) scored a total of 10 or less in their most recent Functional Independence Measures (Uniform Data System for Medical Rehabilitation 2009) cognitive sub-score scale (comprehension, expression, social interaction, problem solving and memory). The study was introduced at a client/staff forum and advertised in the organisational newsletter.

Researchers accessed client files and consulted clinicians to identify eligible participants. Eligible clients were sent out the questionnaire, introductory letter and client information sheet via mail. Participant clients had the option of completing the questionnaire on paper or online, to increase ease of completion and encourage participation. Those completing the online questionnaire entered an unidentifiable code written on the paper questionnaire, ensuring that researchers could identify any instances of participant clients completing both methods. Participant clients were asked to return questionnaires, using the provided self-addressed envelopes. Consent was implied by participation in the questionnaire. Participant clients taking part in the study were informed

about the voluntary nature of participation and their right to decline/withdraw from the study without consequence.

The questionnaires included questions on client age, gender, injury type and time since injury. The questionnaire was used to explore whether sexuality was impacted by the MVI's, whether sexuality was discussed as part of rehabilitation and recovery, and if so, how the conversation was instigated. Other factors explored included satisfaction with how sexuality was addressed, perceived importance of addressing sexuality, whose perceived role it is to discuss sexuality, when sexuality should be addressed and perceived most important characteristics of the health professional addressing sexuality.

Participants: Clinicians

Semi-structured interviews of participant clinicians were used to explore their knowledge, comfort levels and attitudes towards addressing sexuality with clients. Participant clinicians received a written information sheet and signed a consent form advising that their participation would remain anonymous. Interviews were conducted and recorded digitally by one of two researchers, lasting 20 to 60 minutes.

Interview questions included a section on gender, age, profession, years working as an allied health professional and as a service planner. Additional questions aimed to explore addressing sexuality with clients, such as perceived importance, experiences and barriers (see table 1).

Table 1: Interview questions for LSA participant clinicians

No.	Question
1	Tell me how many years have you been practicing as an allied health professional and what is your allied health background?
2	How long have you been practicing as an LSA Service Planner?
3	What is your gender?
4	What is your age?
5	Do you feel that it is important to provide information relating to sexuality for LSS participants as part of their rehabilitation and recovery? Why is this important?
6	Do you perceive that you have a professional responsibility to provide information in relation to sexuality for LSS participants and if so, why?
7	Could you discuss whether you have addressed any aspects of sexuality with LSS participants and what areas these have been?
8	How and/or who has brought up this aspect of sexuality?
9	Whose role do you feel it is to discuss sexuality with LSS participants during the rehabilitation and recovery process and why?
10	What characteristics do you think are important in a health professional addressing sexuality?
11	What is your current confidence level in addressing sexuality with LSS participants, with 0 having no confidence and 10 being extremely confident? Why? 1 2 3 4 5 6 7 8 9 10 _____
12	How comfortable do you feel to addressing sexuality for LSS participants?
13	What do you see as barriers to discussing sexuality with LSS participants?
14	Do you feel that you need any further training in order to address sexuality with participants and if so, what would be helpful?
15	Can you provide any examples of how you would start conversation on this topic with participants?
16	Are you aware of any agencies or providers that you could refer participants to in relation to addressing sexuality and if so explain?
17	How do you think LSA could improve practice in this area?
18	Do you have any further comments to add in relation to sexuality for LSA participants?

Data analysis

Questionnaires

For the analysis of questionnaires completed by participant clients, descriptive statistics (frequency, means and SD) were used to provide an outline of sociodemographic and injury related information. Results were merged and analysed using excel.

Interviews

Researchers employed thematic analysis in order to analyse interview data from participant clinicians. Interview data were de-identified, coded, categorized and collated into themes by two researchers. The six phases of thematic analysis were carried out by the researchers, as outlined by Braun and Clarke (2022). Researchers completed member checks verbally throughout the interviews with staff. Interviewers constantly checked their understanding of phenomenons using techniques such as paraphrasing and summarisation to clarify information.

Results

Quantitative data

Participant clients

Out of the 87 clients deemed eligible to participate, 21 completed and returned questionnaires, 16 via post and 5 online. The demographics of respondents, described in Table 2, were predominantly male (66.67%), from a range of age brackets. TBI represented the most common injury type (55%), followed by SCI (25%), amputation (10%), burns (5%) and BPI (5%).

Table 2 Demographics of Participant clients completing questionnaires

Variables	Frequency(%)
Gender	
Female	7 (33.33%)
Male	14 (66.67%)
Age in years	
18-29	7 (33.33%)
30-39	3 (14.28%)
40-49	5 (23.81%)
50-59	4 (19.05%)
60-69	1 (4.76%)
70+	1 (4.76%)
Injury type	
SCI	5 (25%)
TBI	11 (55%)
Amputation	2 (10%)
Burns	1 (5%)
Brachial plexus injury	1 (5%)
Time since injury in months	
0-3	0 (0%)
3-6	4 (19.05%)
6-12	2 (9.52%)
12-24	8 (38.09%)
24-36	7 (33.33%)

Note. *N*=21

Over half of participant clients interviewed, as detailed in Table 3, advised that the MVI's had impacted on their sexuality. One third reported that sexuality was addressed as part of their rehabilitation. On average, participant clients rated their level of satisfaction with how sexuality was addressed as part of rehabilitation as 5/10 and rated the importance of addressing it as 7/10.

Table 3 Sexuality data relating to rehabilitation and sexuality for LSS participant clients participating in survey

Variables	**Frequency(%) / *M*(*SD*)**
Impact of MVIs on sexuality	
Yes	12 (57.14%)
No	9 (42.86%)
Was sexuality addressed during rehabilitation	
Yes	7 (33.33%)
No	14 (66.67%)
Satisfaction with how sexuality was addressed as part of rehabilitation[a]	5.0 (3.31)
Importance of addressing sexuality as part of rehabilitation[a]	7.05 (3.39)
Comfort level discussing sexuality with health professionals post the motor vehicle injuries[a]	7.23 (2.54)

Note. *N*=21. [a]Range = 0-10

Participant clients had mixed views about at what stage of rehabilitation sexuality should be addressed, as described in Table 4. A combination of settings (58%) was most the popular response, followed by inpatient rehabilitation (21%), community/outpatient rehab (16%) and acute (5%) (see table 4). Participant clients reported that if sexuality was

discussed as part of rehabilitation, it was more likely to be brought up by the health professional (33%) than instigated themselves (14%).

Table 4 Participant client ratings on roles, timing and important characteristics of health professionals discussing sexuality

Variables	**Frequency(%) / *M*(*SD*)**
Whose role do you feel it is to discuss sexuality as part of rehabilitation post motor vehicle injuries?	
LSA service planner	2 (9.52%)
GP	12 (57.14%)
Nurse	3 (14.26%)
OT	2 (9.52%)
Peer support/mentor	3 (14.26%)
Physiotherapist	2 (9.52%)
Psychologist/counsellor	10 (47.62%)
Rehabilitation physician	8 (38.09%)
Social worker	3 (14.26%)
Speech pathologist	0 (0%)
Other	0 (0%)
None	1 (4.76%)
How was sexuality addressed during rehabilitation?	
Handout by health professional	3 (14%)
Discussion instigated by health professional	7 (33%)
Discussion instigated by me	3 (14%)
Other	1 (5%)
Important characteristics of health professional discussing sexuality	
I feel comfortable with them	16 (76.19)
Knowledgeable	10 (47.62)
Age	2 (9.52)
Gender	4 (19.04)
Availability	2 (9.52)

Confidentiality	8 (38.09)
What setting do you feel is most appropriate to address sexuality?	
Acute hospital	1 (5%)
Inpatient rehabilitation	4 (21%)
Community/home rehabilitation	3 (16%)
Combination	11 (58%)

Note. *N*=21

In relation to whose role it is to address sexuality, GP was most commonly nominated by participant clients (57.14%) followed by psychologist (47.62%) and rehabilitation physician (38.09%). Only 9.52% of clients identified that it was part of the service planner's role to address sexuality post MVI's (see Table 4). On average, clients rated their comfort levels in discussing sexuality post MVI's with health professionals as 7.23 out of 10. When rating important characteristics of health professionals when discussing sexuality (see table 4), participant clients reported feeling comfortable with them as most important (76%), followed by their knowledge levels (47%) and retaining confidentiality (38%). Age (9.5%) and gender (19%) were rated as less important.

Participant clinicians

The demographics of clinicians who participated are described in Table 5. Of the 10 eligible clinicians, 10 volunteered to participate, completing face-to-face interviews. Participant clinicians ranged in age from 29 to 52 years. All clinicians were female, from backgrounds including occupational therapy (60%), social work (20%), physiotherapy (10%) and speech pathology (10%). Years working as a service planner ranged from 2 months to 3.5 years (mean of 21.8 months) and 5 years to 32 years (mean 16.2 years) working as an allied health professional.

Table 5 Demographics of participant clinicians interviewed

Variables	Frequency(%) / *M*(*SD*)
Gender	
Female	10(100%)
Male	0(0%)
Age	38(8.33)
Length of time working as LSA Service Planner (in months)	21.8 (13.8)
Length of time working as Allied Health Professional (in years)	16.2 (9)

Note. *N*=10

Qualitative data

Thematic analysis revealed 4 key areas, with overlap between themes at times.

'Whole person' approach

Participant clinicians highlighted the importance of addressing sexuality for clients as part of rehabilitation. They agreed that sexuality was "often missed", however was part of "person-centred practice" and considering the "whole person". There were varying responses from clinicians about whether they had ever addressed sexuality with clients, with one participant clinician having never addressed sexuality and another frequently doing a "check" with clients. Most participant clinicians described a total of 3-4 occasions of discussing sexuality with clients since commencing their role.

Timing, delivery and responsibility of discussions

Timing

Participant clinicians consistently reported that the topic of sexuality should be brought up early in rehabilitation, to "open the door" for clients. They discussed that even if it was not

a priority for clients at the time of initial discussion, it would provide an in-road for it to be discussed later on:

> "It's really important for us just to make sure that we introduce the topic and allow that space to have it spoken about." (Participant 2)

One participant clinician highlighted that clinicians needed to be open to several conversations about this topic:

> "It might not be one conversation, it might be several conversations and it might take time to build." (Participant 5)

Delivery and initiation of discussions

Participant clinicians outlined that they had a professional responsibility to provide information relating to sexuality to clients. Many participant clinicians highlighted the need to move into the conversation "gently" and not "cold turkey". There were varying ideas about ways to approach the conversations. Some participant clinicians spoke about waiting for an "in" from the client to begin the discussions:

> "I don't initiate a conversation around it, because I perceive it as somewhat personal and you don't want to seem like you're prying into that. So I'll wait for a lead in, and then try and address it in that way". (Participant 9)

Other participant clinicians stated that the best way to bring up the conversation was by linking it to life roles or relationships:

> "I will link it to roles, checking how things are going in all areas of life." (Participant 1)

Responsibilities of health professionals

Varying views were expressed about which health professional was most suitable to address sexuality. Most participant clinicians reported that it was the role of all health professionals, depending on the concern. Many participant clinicians stated that they were well placed to discuss this topic, as they supported clients through their entire rehabilitation journey and could potentially fund "things to help".

One participant clinician highlighted that these ongoing relationships with clients may prove a barrier to discussing sexuality:

> "Whilst we have an ongoing relationship with our clients, I think sometimes that's intimidating as well, because you know you have to see that person again. Whilst it's a good thing, it might also make people a little bit hesitant to talk about some things in a really liberal capacity". (Participant 3)

Two participant clinicians highlighted that clients may feel more comfortable speaking to a doctor or rehabilitation physician about sexuality concerns, as this "medicalised" the topic, potentially making them feel more at ease. (Participant 1 and 4)

Culture and comfort

Taboo

Several participant clinicians expressed that sexuality remains a taboo topic in both rehabilitation settings and society and was a barrier to discussions with clients. One participant clinician stated:

> "The more we talk about it the less taboo it is." (Participant 2)

Age and gender

Participant clinicians frequently stated that age and gender were barriers to discussing sexuality with clients. Younger participant clinicians appeared to be more affected by a clients age than older ones. One participant clinician stated:

> "a lot of our clients are males of a similar age, which can sometimes be a bit confronting, having someone of the opposite sex discussing it". (Participant 5)

Comfort levels

Participant clinicians described various comfort levels in relation to discussing sexuality with clients. Three participant clinicians expressed feeling very confident in discussing sexuality with clients. The remainder expressed moderate or low comfort levels, based on the specific sexual concern, rapport and relationship with the client or perceived comfort levels of the client:

> "It depends a lot on who the client is; some I'd feel much more comfortable and some I've felt quite uncomfortable having those conversations. It depends very much on the

client and what sort of relationship I have with them. But it probably shouldn't".

(Participant 7)

Participant clinicians consistently spoke about how clients could "sense" their comfort levels during a conversation relating to sexuality and how this impacted on their own comfort levels:

"As the clinician we need to be comfortable with talking about it and I think people know when you're not comfortable with a subject and they pick up on that really quick. If the person asking the questions is uncomfortable, that makes them uncomfortable".

(Participant 2)

Perceived topic sensitivity

Several participant clinicians reported that sexuality is a sensitive topic and needed to be approached carefully. Some participant clinicians advised that they worried that addressing the topic may be inappropriate or invasive, potentially affecting their long-term relationship with the client:

"it's somewhat personal and you don't want to seem like you are prying into that".

(Participant 1)

Current organizational facilitators

Participant clinicians outlined that by clients receiving information about this study, it had "opened the door" for discussions relating to sexuality:

> "The client brought up the topic because he'd received the survey and it was something that he'd obviously been wanting to talk about but hadn't had an inroad before". (Participant 7)

> "Participation in this project has increased clinician and client awareness in addressing sexuality. We need to make sure that this stays at the forefront of our interactions with people". (Participant 5)

Participant clinicians also advised that the recent inclusion by organisation of the World Health Organisation Quality of Life (WHO-QOL) in practice as an outcome measure (unrelated to this study) had provided the opportunity to explore questions relating to sexuality with clients. They advised however that further implementations were required in addition to the use of this outcome measure to ensure that sexuality was adequately addressed.

Future tools and skill sets

Knowledge of community referral sources

Participant clinicians highlighted that they lacked knowledge of existing services in the community to address any sexuality concerns of clients. They requested further knowledge of where to refer Clients for sexuality related issues, expressing that this would increase their confidence and comfort levels:

> "Where do we go, what information can we give, who can we refer to" (Participant 9)

Inclusion of sexuality in assessment tools

Participant clinicians reported that the inclusion of sexuality related questions as part of existing assessment tools would allow consistency and opportunity for clients to discuss this topic. Participant clinicians had various suggestions about where this would fit, such as in the Pre-Injury Information Form, My Plan or both. One participant clinician stated:

> "It's about how we can become habitual in addressing it within what we are already doing so as not to create more work but to slot it in there gently. I don't think another assessment is the solution". (Participant 1)

Education for clients

The majority of participant clinicians recommended that the organization provide further education to clients about how they could assist with issues relating to sexuality, including funding. Suggestions included through the website, newsletter or handouts. One participant clinician commented:

> "Information to give clients to let them know it's ok, you can talk to your service planner about this – let people know the door is open". (Participant 6)

Training for clinicians

Participant clinicians consistently reported the need for further training tailored to the organisation relating to addressing sexuality. Ideas included how to bring up the conversation, how to make it more comfortable, how to "word" the conversation, goal setting in the area of sexuality, sexual function relating to various injury types (particularly SCI and TBI) and the impact of medications on sexual functioning. One participant clinician reported:

"I can honestly say I don't know how a brain injury would affect sexual function" (Participant 10)

Discussion

To our knowledge, this is the first study to examine how sexuality has been addressed through the rehabilitation journey following traumatic MVI's. Based on previous studies relating to addressing sexuality as part of rehabilitation, we expected that there were gaps in service provision for clients as part of their rehabilitation and that clinicians were lacking skills, training and resources to address sexuality. Both hypotheses were validated during this study. The study also provides information on barriers and facilitators to addressing sexuality post MVIs.

Both client and clinician participants identified addressing sexuality as an important part of rehabilitation, which is consistent with other studies (McAlonan, 1996; Parker & Yau, 2012). Participant clinicians highlighted that addressing sexuality was part of "person-centred practice" and their professional responsibility. Participant clients rated the importance of addressing sexuality in rehabilitation as high but their level of satisfaction with how sexuality was addressed as moderate. Lack of satisfaction with how sexuality is addressed as part of rehabilitation has been commonly stated in the literature (Northcott & Chard, 2000; Verschuren et al., 2013).

This study concurred with previous studies, outlining a low frequency of discussions relating to sexuality as part of rehabilitation (Moreno et al., 2015, Verschuren et al., 2015).

Our study found that limited numbers of participant clients initiated these discussions with health professionals. However, their preference for who should initiate these conversations was not explored and may have added value to the study. Potential reasons for participant clients not initiating discussions may be due to embarrassment (Moreno et al., 2015) or lack of awareness regarding the link between the injury and the sexual issues (Nicolosi et al., 2006).

Similarly, participant clinicians reported rarely instigating these discussions, partly as they felt that the conversation may be intrusive or sensitive. Other studies have also shown similar results (Leibowitz, 2005, Fritz et al., 2015). Interestingly, participant clients outlined that they did feel comfortable discussing sexuality as part of rehabilitation with health professionals. This is consistent with a study by Moreno et al. (2015) stating that individuals with TBI "desired increased openness about discussing sexual concerns" (p. 99). These findings highlight that clinicians need to employ a more proactive and routine approach to addressing this topic, whilst retaining an awareness of sensitivity.

Clinician and client participants reported that the acute setting alone was not the ideal time to have sexuality discussions. This is consistent with other studies showing that in the acute stage other goals such as walking were likely to take priority (Leibowitz, 2005, Fritz at al., 2015). Participant clinicians highlighted that discussions needed to be offered early, ensuring a "safe space" for addressing concerns when clients were ready, potentially requiring several conversations throughout the rehabilitation journey. Participant clients also stated that conversation needed to be accessible in a combination of inpatient and community settings. The need for these discussions to be held on a continuing basis has

also been highlighted by Northcott and Chard (2000). Evaluation of implementation of this recommendation requires further research.

In line with previous studies, participant clinicians agreed that discussions relating to sexuality were the responsibility of all rehabilitation professionals (Dyer & Nair, 2014; Esmail et al., 2010; Haboubi & Lincoln, 2003). However, some participant clinicians stated that clients may feel more comfortable liaising with a GP or rehabilitation physician about these issues. Participant clients also agreed, nominating these discussions to be most likely the role of their GP, psychologist or rehabilitation physician. It would have been beneficial to explore the reason for these responses. This is consistent with a study by Moreno et al., (2015), whereby the family physician, psychologist and sexologist were considered by service-users, the most appropriate professionals to have these discussions with.

Most participant clients did not feel that it was the role of clinicians to address sexuality with them. In contrast, participant clinicians expressed feeling well placed to discuss sexuality due to their ongoing relationship with the clients and potential to provide funding supports. This difference in opinion may be due to a lack of education for clients around what funding and supports the organisation can provide relating to sexuality, or limited knowledge of the role of the service planner. Further qualitative data from clients may have shed further light on the reasons for these responses. Written information and a discussion around what the organisation can offer may be useful for clients.

Participant clinicians reported that age and gender were barriers to discussing sexuality with clients. Younger participant clinicians found age to be more of a barrier which is consistent with other studies (Haboubi and Lincoln,2003, Kazukauskas and Lam 2010).

Interestingly, age and gender were rated by participant clients as amongst the least important characteristics of clinicians. Participant clients rated comfort levels as the most important characteristic of health professionals addressing sexuality, which is consistent with the findings of other studies (Esmail et al., 2010; Schmitz & Finkelstein, 2010).

Participant clinicians discussed the impact that their own comfort levels had on willingness to initiate conversations relating to sexuality with clients. As highlighted by McAlonan (1996) as part of future training, it may be beneficial for clinicians to further reflect on their own comfort levels, values, beliefs and professional limitations relating to sexuality and how to address this topic with those that they feel least comfortable with. As shown in previous studies, it is likely that the more frequently sexuality issues are addressed, the more comfort health professionals will experience (Higgins et al., 2012; Sander et al., 2013).

Several facilitators of conversations about sexuality with clients, were identified by clinicians. These included recent service implementations such as use of the WHO-QOL outcome measure and exposure to this study. Participant clinicians reported both impacted positively on addressing sexuality and decreasing taboo as an organisation and were a positive sign that further implementations would yield benefits.

Participant clinicians suggested a range of service developments to improve practice in addressing sexuality with clients. The first being the use of sexuality related questions as part of existing assessment tools or interviews, as is recommended in previous research (Dyer & Nair, 2014; Sander et al., 2012; Simpson, 2001). This may involve performing a "screen"; namely a question or questions included during initial information gathering. Simpson (2001) explains that this option is not particularly intrusive but provides clients with the opportunity to discuss any concerns. Our research also shows that clinicians

should incorporate this into assessment and discussion at various stages of rehabilitation. To the author's knowledge limited research has been completed in this area, and requires further investigation.

Access to information resources relating to sexuality for clients such as leaflets, booklets, online content or within existing service information has been recommended by clinicians, as well as in previous research (Marier Deschênes et al., 2019, Robinson et al. 2010, Simpson, 2001). This could include how specific injury types may impact on sexuality and outline supports that the organisation could fund, with the aim of normalising the topic and granting permission to talk about sexuality relating to injuries.

Previous research highlights that health professionals do not need to be experts in the area of sexuality in order to open dialogue with service-users (Dyer & Nair, 2014). Participant clients however advised that knowledge levels of health professionals when addressing sexuality were important. Further qualitative research with clients may provide further insight into how they define "knowledge" and whether they expect health professionals to have the expert knowledge themselves or alternatively know where to access it and who to refer to. The need for additional information regarding referral sources in the community was highlighted by participant clinicians and is supported by other studies (Esmail et al., 2010; Simpson, 2001). Schmitz and Finkelstein (2010) state that any written information should be paired with direct conversation.

Organisation specific clinician training was highlighted as a future facilitator of conversations relating to sexuality. Lack of training on this topic is a common barrier identified by health professionals (Moreno et al., 2015; Verschuren et al., 2013). Training in the area of sexuality for health professionals has been shown to lead to increased comfort, knowledge and confidence (Fronek et al., 2011; Higgins et al., 2012). Sexuality

training for clinicians should include reflection on own values and professional and personal limitations relating to sexuality, common sexual changes for specific injury types, phrasing and facilitating the conversation, goal setting and the impact of medications.

Limitations and implications for future practice

The generalisability of findings is limited by the small sample size, with a questionnaire response rate of 24%. However, this is comparable to that of other studies in this area, with response rates ranging from 9% (Vershuren et al., 2015) to 38.8% (Moreno et al., 2015). Future studies with larger sample sizes could provide further understanding of the needs, barriers and facilitators relating to addressing sexuality post traumatic MVI's. Despite this, the clients represented a wide range of individuals who provided useful information relating to their experiences and opinions.

The low proportion of respondents with a diagnosis of BPI, burns and amputation was expected, and representative of the overall current make-up of the client population. However, this limits the transferability of results for these cohorts. The impact of injury on sexuality for these diagnostic groups should be explored further, with larger samples. All clinicians participating in the study were female. Whilst allied health is largely a female dominated field, it would be useful to gain the views of male health professionals in order to provide further insight into this topic. Due to the topic sensitivity it is possible that those clients most comfortable in discussing sexuality may have responded, limiting generalizability.

TBI is the dominant diagnosis group at the organisation and can result in cognitive deficits (Raboninowitz & Levin, 2014). This may have impacted on this group's participation in completing the questionnaire. Examples may include forgetting to complete questionnaire, mental fatigue during completion or loss of paper copy. Those

with severe TBI were excluded from the study. Further research should focus on or include the needs of this group.

The interviewing of clients may have provided further insight into their experiences and needs. However, the chosen method was used as it was felt to be least invasive, threatening and time intensive. Despite the researcher's attempts at making the study definition of sexuality clear, it is possible that some study clients focused more on sexual activity and function rather than areas such as body image, confidence or roles, potentially impacting on results.

Conclusion

These findings have provided details from both clinicians and clients as to how sexuality is addressed during rehabilitation following traumatic MVI's, and barriers and facilitators relating to this topic. This research has shown that sexuality post MVI's is not addressed sufficiently as part of rehabilitation, but is recognised as important by clients and clinicians. Addressing sexuality should be an organizational expectation, with considered measures put in place to allow a safe space for this topic to be explored. The study's findings have offered valuable information for healthcare professionals providing services to a range of injury types, working in a rehabilitation role or providing a service covering a service user's entire rehabilitation journey. It is important for future training, access to referral resources and written information about sexuality in rehabilitation needs to be evaluated. Further research into implementing consistent sexuality assessment throughout the entire rehabilitation journey is warranted.

Key messages:

- Addressing sexuality is important to clients with MVIs and clinicians
- Clinicians require training and resources to facilitate conversations relating to sexuality
- Sexuality should be addressed at multiple stages of rehabilitation

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