



What are the perspectives that people with spinal cord injury receiving rehabilitation in hospital have surrounding a virtual reality intervention?

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SUMMARY

Inpatients perspectives suggest that engaging with natural environments delivered via virtual reality can:

- I. Improve immediate mood
- II. Provide an escape
- III. Potentially result in a lasting impact
- IV. Cause motion sickness if environments involve movement

BACKGROUND

People with spinal cord injury (SCI) spend an extended time in hospital receiving rehabilitation.

For example, average rehabilitation length of stay for people with SCI is somewhere between 43 and 206 days [1].

Hospital environments have been identified as adversely impacting the emotional health of inpatients [2].

As adverse psycho-emotional health outcomes are already a consequence of experiencing an SCI [3], it is important that innovative emotional health promoting rehabilitation programs are offered.

BACKGROUND

Leisure therapists from the **Spinal Injuries Unit at the Princess Alexandra Hospital** have been facilitating virtual reality sessions for inpatients.

During sessions inpatients are able to engage with diverse virtual environments.

These interventions have been well received however, **it is important that research investigates the impact of the intervention to ensure that there is an evidence-base to support the practice.**

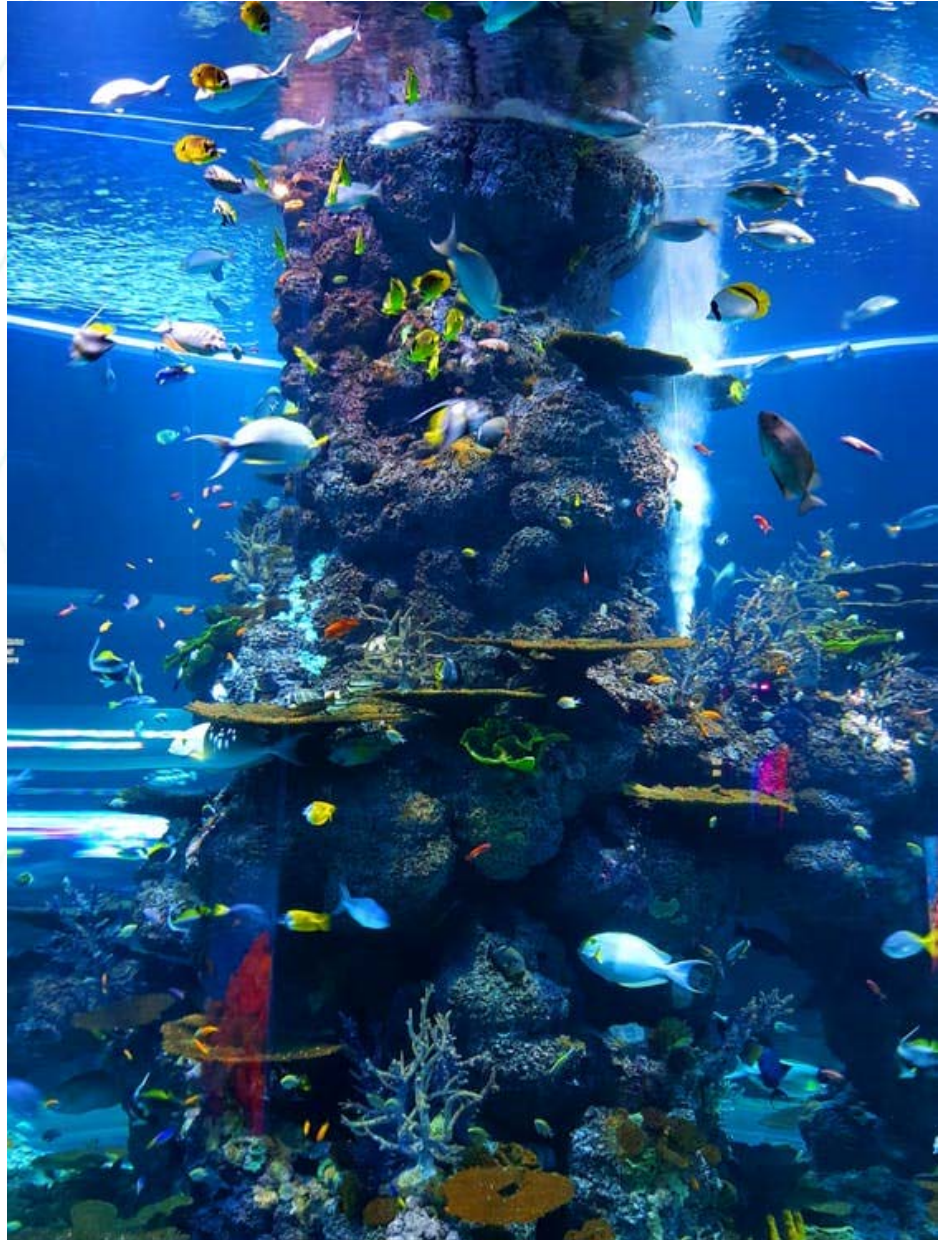


THE CURRENT STUDY

The research team received a Hopkins Centre Seed Grant to conduct a mixed-methods which aimed to ascertain the impact of engaging with multiple virtual reality sessions over a period of one week on the mood of inpatients with an SCI.

Participants engaged with between 2 or 3, 20-minute virtual sessions over a period of week.

The virtual reality experiences were natural environments as recent researched has established that engaging with natural environments improves the emotional health of people with neurological disability [4], and simulated natural environments can also improve mood [5].



METHODOLOGY

Participants were randomized into one of two groups, Group 1 experienced the intervention (2-3 virtual reality sessions) during the first week while Group 2 experienced the intervention during the second week.

A semi-structured interview was progressed at the end of the second week to ascertain inpatients perspectives of the intervention.

The current presentation provides preliminary findings from qualitative data collected.

INTERVIEW QUESTIONS

What are your thoughts about the VR sessions? What parts did you like, what parts did you dislike?

How did the VR intervention make you feel? How long did this feeling last?

Thinking back over the last 2 weeks, did you feel different during the week you participated throughout the VR sessions?

ANALYSIS

Two members from the research team are currently analysing interview transcripts.

Themes are being generated using an inductive approach, in-line with each research question that they aimed to answer.

Preliminary findings are presented in relation to each research question within subsequent slides.

What are your thoughts about the VR sessions?

Escape

'... I enjoyed that, it's got me out of the hospital for a while, it's in a different place, until it finished. Wish it had kept on going. Wish there were more. I liked them all, every one...'

*'... It made **me happier. It took me to a place away from my miserable place.** It made me feel good...'*

*'... Yeah and no. **You sort of forget where you are there for a little bit,** because you're just too busy looking at everything. You sort of - semi-sort of forget where you are but when you take them off, you're sort of like, oh right okay, but yeah, I liked them. Yeah. ...'*

What are your thoughts about the VR sessions?

I thought it was awesome actually.....-making you feel like you're in a different world. You're not sitting in a hospital stuck in your bed or your chair. You're visually snorkelling on the reef, which I really liked because that was actually how it is. ***It just gives you that break for that half an hour or 10-minute session, however long the videos go for. You forget that you're here which I think is important because you need to escape these - sitting in your own room....***It gives you that break and ***it gives you the motivation to think well you can go home and you can go to the reef or go check out the orangutans or whatever.*** Yeah. It almost gives you that drive again to think oh I feel refreshed; I've had my mini holiday; let's keep going. Well that's how I felt. I felt like you've got a new lease of life. Okay, let's go deal with it again. (Participant ID 3)

What are your thoughts about the VR sessions?

Motion sickness

'... Yeah, the one [over the falls] felt like I was falling but the orangutans, that was a completely different feeling. That was like ***more of a sick in the gut feeling*** because everything just moved too fast and it was too - too big.....'

'...Yes, ***some of them I loved, others I think it was just me that - it made me motion sick***, but that is just me....'

How did it make you feel?

Positive mood

'...I guess, **probably positive and excited after it**, seeing the different things that you learn about it was just - it was cool, I liked it...'

'...Yeah, **relaxed**, happy. I have - feel a lot happier since I watched them...'

'... Yeah, felt more **relieved**....Yeah, just relaxed and stuff. ..'

'... I **enjoyed** it ...made me feel entertained...'

How did it make you feel?

Feeling duration

'...I wouldn't say for me they lasted any great deal of time. It was fun doing it while I was doing it but afterwards for me I was back to...It was like here I am again. ...'

'...When they finished, I knew I was back to reality but every time I think about them, I feel happy.....'

'... I'd have to say the rest of that day, whatever it was I felt really good after it....

'... The rest of the day I guess, yeah, it was good....'

Did you feel different during the week you participated throughout the VR sessions?

Yes and No

'... ***Not so much*** because every week you have your ups and your downs. Yeah, yeah, yeah. Again, I thoroughly enjoy it and I'd definitely be keen to do more, but ***it's not a fix if you know what I mean. While you're doing it, it gives you that blank canvas for a little while and then you're straight back*** into dealing with everything again....'

'...I have up and down days, I don't know about weeks. Days I get up, on some days and I just feel this - excited by the day than other days. ***I think the week that we did the virtual reality was really interesting because it gave me something that I did feel uplifted*** after I'd done it. I felt good, I find it relaxed and different. ***It gave me something to look forward to***, to go and do that I could get away from the four walls for a minute or so....'

Did you feel different during the week you participated throughout the VR sessions?

Yes and No

'...Oh, **big difference...Just made me feel a lot happier.** Made me think of the future, what I couldn't - it will help me get back to a sort of a normal life...'

'...**I reckon it was around the same.** Like I said, it took my mind off it for the half an hour or whatever it is that I was watching the program for, but apart from that, as soon as you take the goggles off, whatever you want to call them, realise back where you are, back in a dumb place...'

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IMPLICATIONS FOR PRACTICE

The program can have a beneficial impact on an inpatient's rehabilitation journey (mood, and motivation), and consequently, the current program and similar programs to improve emotional health should be offered.

It is important that future research investigate the impact on a larger scale, with diverse populations who spend an extended time in hospital.

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THANK YOU

Please feel free to ask any questions that you may have.