ISCoS The International Spinal Cord Society

www.nature.com/sc

CORRESPONDENCE

Check for updates

A response to "Living with a fragmented body": a qualitative study on perceptions about body changes after a spinal cord injury

Spinal Cord; https://doi.org/10.1038/s41393-021-00727-0

It is with great pleasure that we read the qualitative study by Vázquez-Fariñas and Rodríguez-Martin [1], describing an extensive, interview-based qualitative study into patients' perceptions on bodily changes after Spinal Cord Injury (SCI). The authors include a heterogenous cohort of Spanish SCI patients from different gender groups, ages and levels of injury and group their findings on patient perceptions of bodily changes after SCI into two main categories: changes in body schema and an increase in bodily awareness. The authors conclude that 'when healthcare professionals are aware of the changes affecting the body after a spinal cord injury, they display more favorable attitudes and are more involved in promoting the patients' adaptation to their new body schema'. We agree with the author's conclusions and would like to emphasize the importance of this type of work for the field of rehabilitation medicine in general. In previous work centering around embodiment of neural implants for motor recovery after SCI [2], we used similar terminology such as body schema and body image as reported by Vázquez-Fariñas and Rodríguez-Martin [1]. In this response, we would like to strengthen the authors' main argument by placing their used terminology into the context of phenomenology of the body, a philosophical approach to issues of embodiment based on the ideas of Maurice Merleau-Ponty [3].

Phenomenology enables us to clarify the different ways in which one's body can be experienced [4]. Criticizing the dualistic and Cartesian inspired body-mind dualism, phenomenology explains that next to the experience of being a thing or object, one's body can also be experienced as a subject. This body-subject or "lived body" constitutes the zero point for any perception, orientation and action in the world [3]. Most of the time, we experience our "lived body" only in a pre-reflective way. Indeed, in most cases, the lived body is "transparent". However, in situations such as pain, fatigue, disease, illness or injury, the body starts demanding conscious attention, as it becomes inadequate to perform certain tasks. As such, the body becomes more opaque [5].

What was particularly striking in their report, is the authors' inclusion of an example of body opaqueness. They describe how SCI patients create new or increased bodily awareness by 'retraining their body [1]. The authors mention examples familiar to many of us working in a rehabilitative context, such as patients interpreting 'goosebumps' as a message from the body to empty their bladder or bowel. As such—the authors describe—patients seem to enter into a new type of dialogue with the body. Applying our phenomenological approach, we could say that bladder and bowel management have changed from a pre-reflective, transparent habit into a conscious, reflective dialogue with one's body as object. The authors' interpretation of this change remains conceptually a bit unclear as they seem to conflate body schema with body image in their paper. For indeed, according to phenomenology, we need to distinguish between body image, which is conscious, personal and reflective, and body schema which is pre-conscious, pre-personal and pre-reflective [6]. Consciously communicating with one's body to enable bladder and bowel management pertains to the level of body image as it requires conscious reflection. This new type of communication differs from the non-injured situations where all kinds of sensory inputs, such as muscle proprioception and bowel movements are continuously and pre-consciously helping to maintain a state of physiological balance in blissful transparency.

While we believe that their analysis could benefit from further phenomenological clarifications, we endorse the authors' recommendation that it is essential to understand SCI patients' narratives. These kinds of narratives can surface in qualitative studies such as conducted by Vázquez-Fariñas and Rodríguez-Martin [1], but also in various other current studies that explore the lived experience of physical injuries and the embodiment of tools [7]. Knowing what SCI does to a patient's body schema and body image, knowing the effort it takes to find new ways of more 'conscious' sensory feedback, and knowing the level of body opaqueness that will inherently remain, should help create a type of awareness in the health care professional that can be uniquely beneficial. More than just emphasizing the importance of this type of qualitative research being performed, we would like to emphasize the absolute need for health care professionals working with SCI patients to immerse themselves in these and other narratives. More than just working on personalizing diagnostics and treatment of medical conditions as seen in SCI, personalized diagnostics of a patient's current state of body image, body awareness or the integral quality of the body schema should become a permanent and vital part of a health care professionals' repertoire. Now what remains is to find structural and pragmatic ways to include these topics in the next generation's medical curriculum.

S. Soloukey[1,2,3]✉, A. W. Prins[3], H. Zwart[3] and J. Slatman[4]

[1]*Department of Neuroscience, Erasmus MC, Rotterdam, The Netherlands.* [2]*Department of Neurosurgery, Erasmus MC, Rotterdam, The Netherlands.* [3]*Erasmus School of Philosophy (ESPhil), Erasmus University, Rotterdam, The Netherlands.* [4]*Department of Culture Studies, School of Humanities and Digital Sciences, Tilburg University, Tilburg, The Netherlands.*

✉*email: s.soloukeytbalvandany@erasmusmc.nl*

REFERENCES

1. Vázquez-Fariñas M, Rodríguez-Martin B. "Living with a fragmented body": a qualitative study on perceptions about body changes after a spinal cord injury. Spinal Cord. 2021. https://doi.org/10.1038/s41393-021-00634-4.

Received: 2 July 2021 Revised: 16 October 2021 Accepted: 19 October 2021
Published online: 01 November 2021

2. Tbalvandany SS, Harhangi BS, Prins AW, Schermer MHN. Embodiment in neuroengineering endeavors: phenomenological considerations and practical implications. Neuroethics. 2019;12:231–42.
3. Merleau-Ponty M. Phenomenology of perception. Translation: Landes, D. Routledge, 2012. https://doi.org/10.4324/9780203720714.
4. Slatman J. Multiple dimensions of embodiment in medical practices. Med Heal Care Philos. 2014; 17. https://doi.org/10.1007/s11019-014-9544-2.
5. Leder D. The Absent Body. The University of Chicago Press, 1990.
6. Gallagher S. Body image and body schema: a conceptual clarification. J Mind Behav. 1986;7:541–54.
7. Dalibert L. Living with spinal cord stimulation. Sci Technol Hum Values. 2015;41:635–659.

COMPETING INTERESTS

The authors declare no competing interests.

ADDITIONAL INFORMATION

Correspondence and requests for materials should be addressed to S. Soloukey.

Reprints and permission information is available at http://www.nature.com/reprints

Publisher's note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.