Biodiversity and health: exploring patient perspectives

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I do not have any conflict of interest

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Background: Biodiversity and healthcare

- **Biodiversity's health benefits recognised**
  - Physical and mental health benefits
  - Ecosystem services
- **Nature exposure is rarely addressed in healthcare practice as key health determinant**
  - Lack of awareness among health professionals
  - Place for nature prescriptions?

- How do patients **perceive biodiversity**?
- Patients' knowledge and understanding of **local biodiversity vs. objective data**
- How do patients **perceive biodiversity-health connections**?

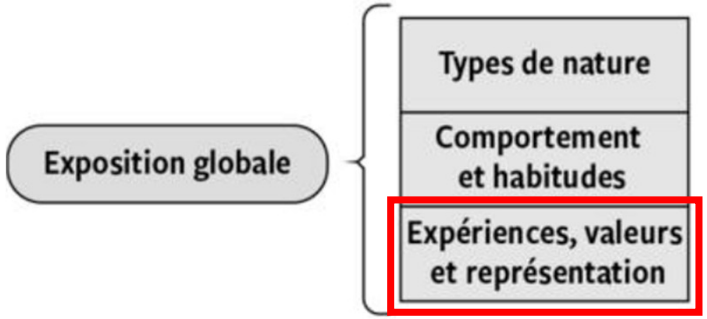
Methods

- **Approach:**
  - Qualitative, inductive, Switzerland-Belgium (French-speaking)
  - Recruitment of patients in about 10 PC practices

- **Data collection:**
  - 42 semi-structured interviews with patients (1-1.5 hours)
  - 60% females, 55% > 56 y, 55% urban/semi-urban

- **Interview support tool:**
  - Species/Vegetation mapping, biodiversity indices.

- **Data analysis:**
  - Transcription
  - Coding and thematic analysis (MAXQDA, NVivo)
  - Cross-analysis (BE-CH)

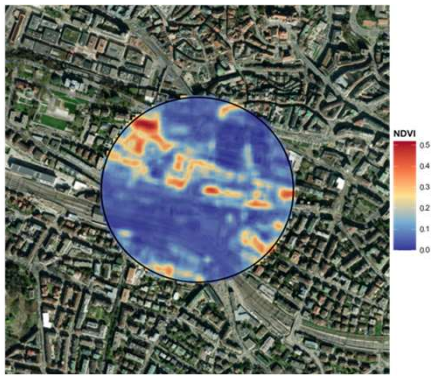


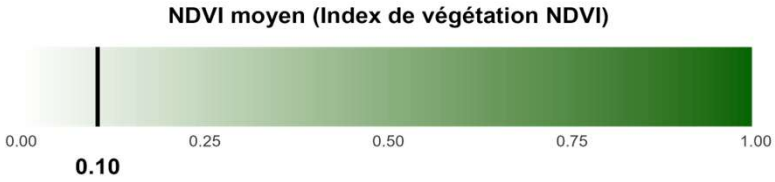
Objective measure of biodiversity

- **Study parameters**
  - **300 m radius** around patients' homes
  - **Comparison with 1,000 households**

- **Index used**
  - Plant/vegetation density (NDVI)
  - Observed species richness (citizen science monitoring sites)
  - Vegetation cover (BE)
  - Modelled species richness (CH)

Example of a map generated for patients, including comparative data:





0 = No vegetation. 1 = Very dense vegetation.

Gap between patients' quote and objective measures:

Results: Patients' perceived biodiversity and nature

- **Biodiversity** is perceived as an **abstract, technical concept**, often equated with "nature", "ecology" or "environment“

> *"I don’t use it much. I find it really **technical**." (M, 65)*
> *"For me, it’s part of all the **ecological fights**." (W, 22)*

- Nature is perceived through **singular, lived experiences** across **varied types of nature** and **practices**.
- These experiences carry a **strong sensory and aesthetic dimension.**

> *"In the forest, what I also **find soothing is the sound** (…) of the **water** or the sound of the **wind in the trees,** the tree screaking. I find these are **sounds that calm you down, that make you feel good.**” (M, 26)*

=> 'Patients shift toward 'contact with nature,' which is more tangible and refers to concrete experiences.

Results: Patients' perceptions of links between health and biodiversity

The **most frequently** mentioned link is the positive **impact on mental health and well-being, but it operates through nature** contact rather than biodiversity itself

> *"Yes, I really find that when it comes to mental health and mental wellbeing, nature is… uplifting, a real help" (M53)*

Link with **physical health** acknowledged but **abstract**

- **Concrete links raised occasionally**: allergies, diet, respiratory diseases

> *"I have the feeling, I'm **not sure there's really a cause-and-effect link**, but I feel that **when biodiversity is doing well**, it means the whole system is doing well. And typically, **us too**." (W. 50)*

Key takeaways

- Biodiversity perceived as **technical and abstract** → patients shift to nature contact: concrete, sensory, experiential
- Mental health benefits most tangible → nature as self-care for well-being.

In practice

- Use sensory entry points: birdsong, landscapes, scents
- Promote self-directed practices: gardening, forest walks, wildlife observation
- Start with mental health to open onto **broader benefits** (cardiovascular, respiratory, chronic)

Next Steps :

- **Study on GPs' perspectives** (ongoing)
- **Advocate for policy**

Thank you for your attention !

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Selected references

Aerts, R., Honnay, O., & Van Nieuwenhuyse, A. (2018). Biodiversity and human health: mechanisms and evidence of the positive health effects of diversity in nature and green spaces. *Br Med Bull*, *127*(1), 5–22. https://doi.org/10.1093/bmb/ldy021

Barboza, E. P., Cirach, M., Khomenko, S., Iungman, T., Mueller, N., Barrera-Gomez, J., Rojas-Rueda, D., Kondo, M., & Nieuwenhuijsen, M. (2021). Green space and mortality in European cities: a health impact assessment study. *Lancet Planet Health*, *5*(10), e718–e730. https://doi.org/10.1016/S2542-5196(21)00229-1

Foley, H., Leach, M., Feng, X., Astell-Burt, T., & Brymer, E. (2023). Towards Key Principles for the Design and Implementation of Nature Prescription Programs. *Sustainability*, *15*(12), 9530.

Maller, C. (2023). Turning things around: A discussion of values, practices, and action in the context of social-ecological change. *People and Nature*, *5*(2), 258–270. https://doi.org/https://doi.org/10.1002/pan3.10272

Marselle, M. R., Hartig, T., Cox, D. T. C., de Bell, S., Knapp, S., Lindley, S., Triguero-Mas, M., Bohning-Gaese, K., Braubach, M., Cook, P. A., de Vries, S., Heintz-Buschart, A., Hofmann, M., Irvine, K. N., Kabisch, N., Kolek, F., Kraemer, R., Markevych, I., Martens, D.,...Bonn, A. (2021). Pathways linking biodiversity to human health: A conceptual framework. *Environ Int*, *150*, 106420. https://doi.org/10.1016/j.envint.2021.106420

Robinson, J. M., Jorgensen, A., Cameron, R., & Brindley, P. (2020). Let Nature Be Thy Medicine: A Socioecological Exploration of Green Prescribing in the UK. *International Journal of Environmental Research and Public Health*, *17*(10), 3460.

Twohig-Bennett, C., & Jones, A. (2018). The health benefits of the great outdoors: A systematic review and meta-analysis of greenspace exposure and health outcomes. *Environ Res*, *166*, 628–637. https://doi.org/10.1016/j.envres.2018.06.030