

# **BMF CP86: The associations between coastal activities enabling close connections to nature and health outcomes**

*AISDL Team*

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“The more he learned, the more he insisted on following such a miracle therapy, especially in this turbulent time of public health crisis.”

—In “The Philosophy of Awakening”; [Wild Wise Weird](#) (2024)

[COLLABORATIVE PROJECT]

## **1. Project description**

### ***1.1. Main objectives***

The current study is conducted to examine the following research questions:

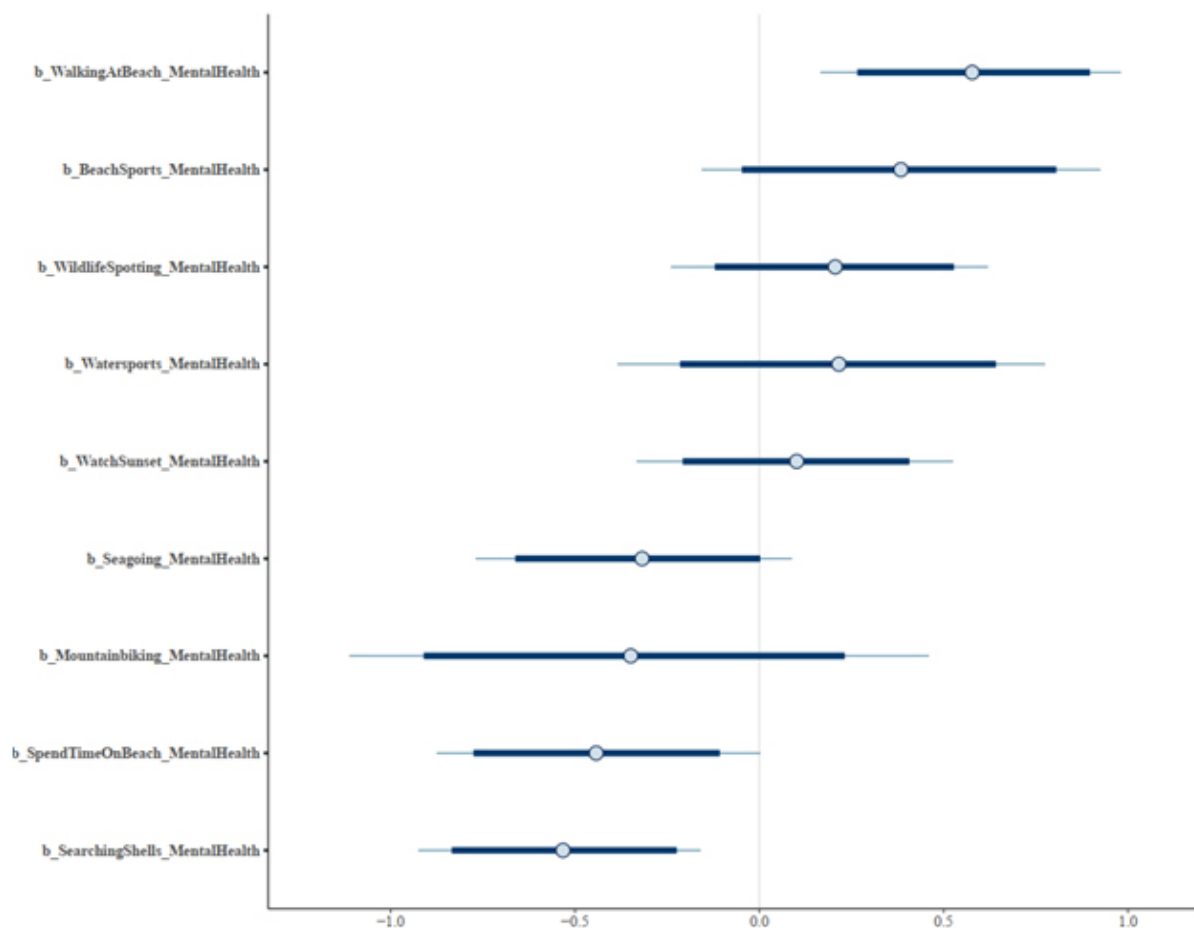
- How are coastal activities enabling close connections to nature associated with the mental health condition of the visitors in the previous year?
- How are coastal activities that have close connections to nature associated with the perceived general health condition of the visitors in the previous year?

### ***1.2. Materials***

The granular interaction thinking of mindsponge theory will be used for the conceptual development of this study, while Bayesian Mindsponge Framework (BMF) analytics will be used for statistical analysis [1-4]. The dataset comprises 1939 responses from the adult Flemish population about their visits to the Belgian coast [5]. Statistical analyses will be conducted using the bayesvl R package, which utilizes the Markov chain Monte Carlo (MCMC) algorithm for estimation [6]. For the sake of research transparency and reducing research and reproducibility costs, we have stored all data and computer code on Zenodo: <https://zenodo.org/records/13844677>.

### 1.3. Main findings

The preliminary analysis shows that some kinds of coastal activities enabling close connections to nature are positively associated with mental health conditions, while some have negative associations (see Figure 1).



**Figure 1:** Estimated coefficients

## 2. Collaboration procedure

Portal users should follow these steps for registering to participate in this research project:

1. Create an account on the website (preferably using an institution email).
2. Comment your name, affiliation, and your desired role in the project below this post.
3. Patiently wait for the formal agreement on the project from the AISDL mentor.

If you have further inquiries, please contact us at [aisdl\\_team@mindsponge.info](mailto:aisdl_team@mindsponge.info)

If you have been invited to join the project by an AISDL member, you are still encouraged to follow the above formal steps.

All the resources for conducting and writing the research manuscript will be distributed upon project participation.

AISDL mentor for this project: **Minh-Hoang Nguyen**

AISDL members who have joined this project: Quan-Hoang Vuong, Viet-Phuong La.

The research project strictly adheres to scientific integrity standards, including authorship rights and obligations, without incurring an economic burden at participants' expenses.

## References

[1] Vuong QH. (2023). *Mindsponge theory*. Walter de Gruyter GmbH. <https://www.amazon.com/dp/B0C3WHZ2B3>

[2] Vuong QH, Nguyen MH, La VP. (2022). *The mindsponge and BMF analytics for innovative thinking in social sciences and humanities*. Walter de Gruyter GmbH. <https://www.amazon.com/dp/8367405102/>

[3] Vuong QH, Nguyen MH. (2024). *Better economics for the Earth: A lesson from quantum and information theories*. <https://www.amazon.com/dp/B0D98L5K44>

[4] Vuong QH, Nguyen MH. (2024). Further on informational quanta, interactions, and

entropy under the granular view of value formation. <https://dx.doi.org/10.2139/ssrn.4922461>

[5] Hooyberg A, et al. (2024). Survey data linking coastal visit behaviours to socio-demographic and health profiles. *Scientific Data*, **11**, 315. <https://www.nature.com/articles/s41597-024-03161-y>

[6] La VP, Vuong QH. (2019). bayesvl: Visually Learning the Graphical Structure of Bayesian Networks and Performing MCMC with 'Stan'. *The Comprehensive R Archive Network*. <https://cran.r-project.org/web/packages/bayesvl/index.html>

[7] Vuong QH. (2024). *Wild Wise Weird*. <https://www.amazon.com/dp/BOBG2NNHY6>

