

# BMF CP98: Parents as motivations for children's waste reusing and recycling behaviors

*AISDL Team*

September 30, 2024

“At a high level of knowledge, learning naturally has to be paired with practice.”

—In “Bird Village Economics”; [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 the father's interactions with children regarding waste recycling associated with the children's recycling behaviors?
- How are the mother's interactions with children regarding waste recycling associated with the children's recycling behaviors?

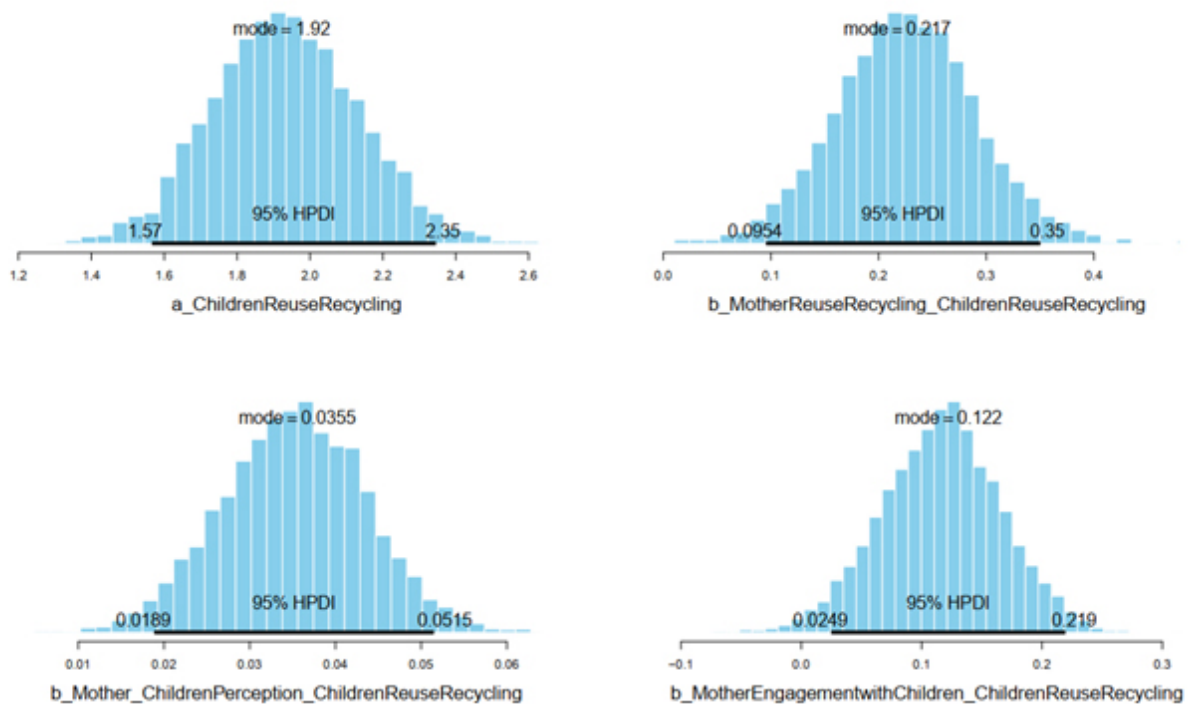
### 1.2. Materials

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 responses from 516 children and their corresponding caregivers in five major urban Chinese cities (Beijing, Harbin, Fuzhou, Guangzhou, and Hangzhou) [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/13859262>.

### 1.3. Main findings

The preliminary analysis shows that the mother’s reusing and recycling behaviors are positively associated with the children’s reusing and recycling behaviors. Meanwhile, the mother’s engagement of children in reusing and recycling activities is not only positively associated with the children’s reusing and recycling behaviors but also reinforces the association between the mother’s reusing and recycling behaviors and the children’s reusing and recycling behaviors (see Figure 1).



**Figure 1:** The estimated posterior distributions

## 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

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

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[5] Jia F, Yu H. (2023). Brief data report on parent-child pro-environmental engagement across five cities in China. *Data in Brief*, **36**, 106970. <https://doi.org/10.1016/j.dib.2021.106970>

[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>

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