BMF CP24: Family encouragement, information exchange, and awareness of cultural diversity, global interdependence, and peace among students

AISDL Team

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1. Project description

1.1. Main objectives

The current study has four objectives to examine whether:

1. The family's provisions of cultural-historical knowledge of other countries, communication methods with people in different cultures, and encouragement to learn foreign languages are associated with students' willingness to exchange historical and cultural information with other people.
2. Students' willingness to exchange historical and cultural information with others is associated with their awareness of cultural diversity.
3. Students' willingness to exchange historical and cultural information with others is associated with their awareness of global interdependence.
4. Students' willingness to exchange historical and cultural information with others is associated with their awareness of peace protection.

1.2. Materials

The mindsponge theory will be used for conceptual development, and Bayesian Mindsponge Framework (BMF) analytics will be used for statistical analysis on a dataset of 2069 students in Vietnamese primary, secondary, and high schools [1-3]. The *bayesvl* R package, aided by the Markov chain Monte Carlo (MCMC) algorithm, will be employed for statistical analyses [4].

All the materials and code for this study will be made available only to reduce the cost of doing science and transparency [8,9]. For more information on BMF analytics, portal users can refer to the following book [5]. Data and code snippets of this initial analysis were deposited at: https://osf.io/bu93t/.

1.3. Main findings

The findings show that the family's provisions of cultural-historical knowledge of other countries, communication methods with people in different cultures, and encouragement to learn foreign languages are positively associated with students' willingness to exchange historical and cultural information with other people (see Figure 1).
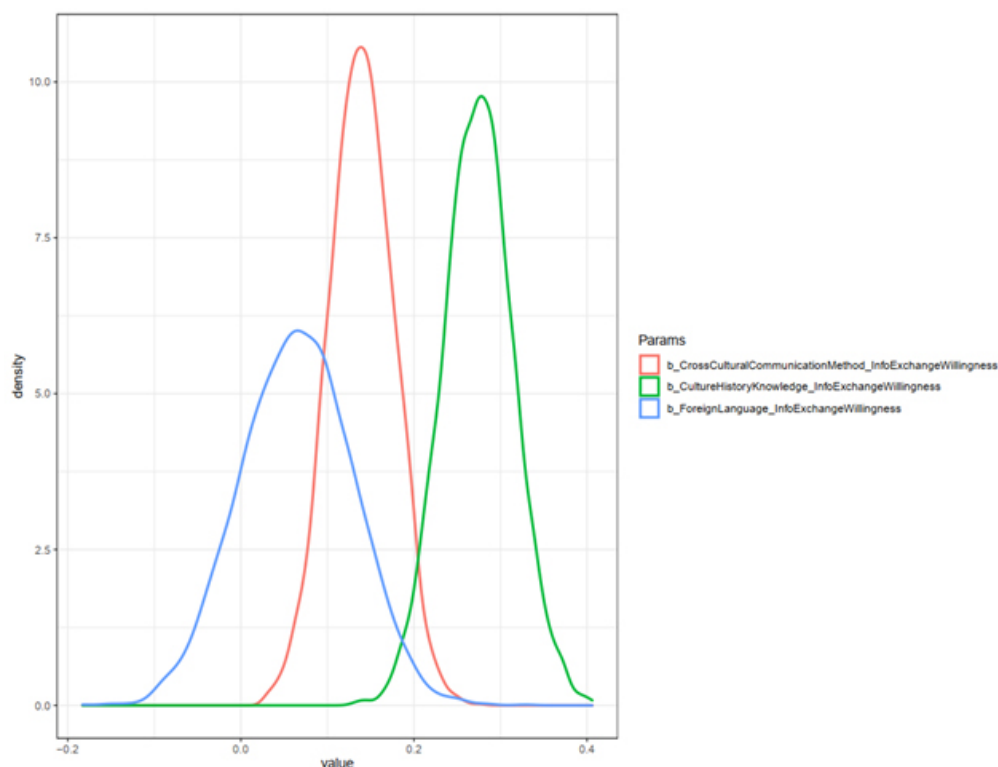

Figure 1. Posterior distributions of the first analytical model's coefficients.

We also found that students' willingness to exchange historical and cultural information with others is positively associated with their awareness of cultural diversity, global interdependence, and peace protection (see Figure 2).
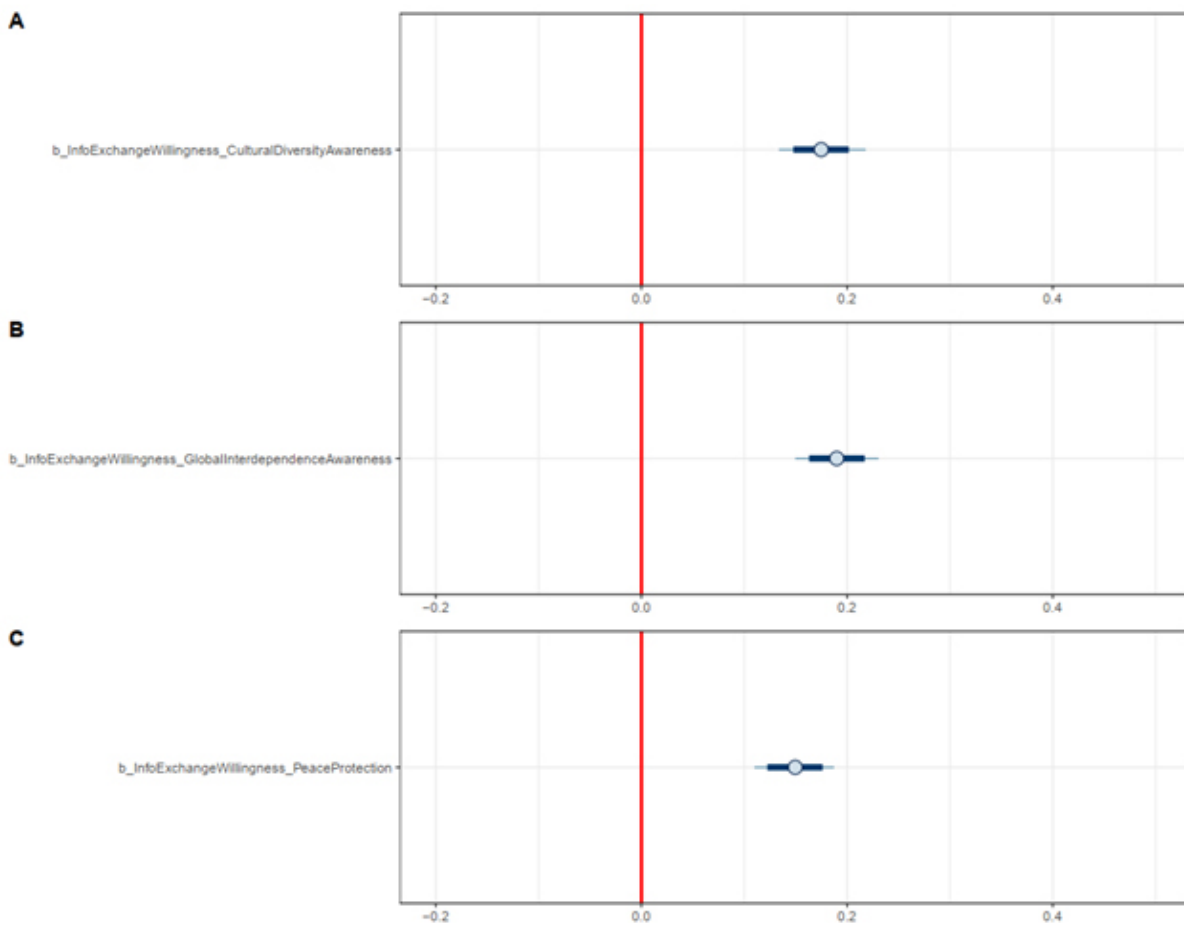
Figure 2. Posterior distributions of the second, third, and fourth analytical models' coefficients

2. Collaboration procedure

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

- Create an account on the website (preferably using an institution's email).
- Comment your name, affiliation, and your desired role (e.g., literature review, method and material description, result presentation, discussion, etc.) in the project below this post.
- 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.

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-Phuong Thi Duong**.

AISDL members who have joined this project: Minh-Hoang Nguyen and Quan-Hoang Vuong.

The research project strictly adheres to scientific integrity standards, including authorship rights and obligations. We look forward to working with participants on this research project.

Remarks: Dr. Minh-Phuong Thi Duong (Ton Duc Thang University) has taken over the responsibilities to coordinate and mentor this project, effective from August 30, 2024. [Last updated: Sept. 1, 2024]

References

[1] Nguyen MH, La VP, Le TT, Vuong QH. (2022). Introduction to Bayesian Mindsponge Framework analytics: An innovative method for social and psychological research. *MethodsX*, 9, 101808.

[2] Nguyen HL, et al. (2021). School students' perception, attitudes and skills regarding global citizenship-dataset from Vietnam. *Data in Brief*, 37, 107162.

[3] Vuong QH. (2023). *Mindsponge Theory*. De Gruyter.

[4] La VP, Vuong QH. (2019). bayesvl: Visually Learning the Graphical Structure of Bayesian Networks and Performing MCMC with 'Stan'. *The Comprehensive R Archive Network*.

[5] Vuong QH, Nguyen MH, La VP. (2022). *The mindsponge and BMF analytics for innovative thinking in social sciences and humanities*. De Gruyter.