



Promoting Sense of Belonging and Interest in Geosciences among Undergraduate Women Through Mentoring

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INTRODUCTION

Rationale

Why recruit & retain women in geoscience?

- Underrepresented
- Lack of diversity limits scientific innovation and societal relevance

Why interest and mentoring matters?

- Interest helps attracting and keeping students in the field¹.
- Faculty mentor can increase women's interest and persistence in STEM².
- Holistic support is a vital factor of sense of belonging³.

Theoretical model

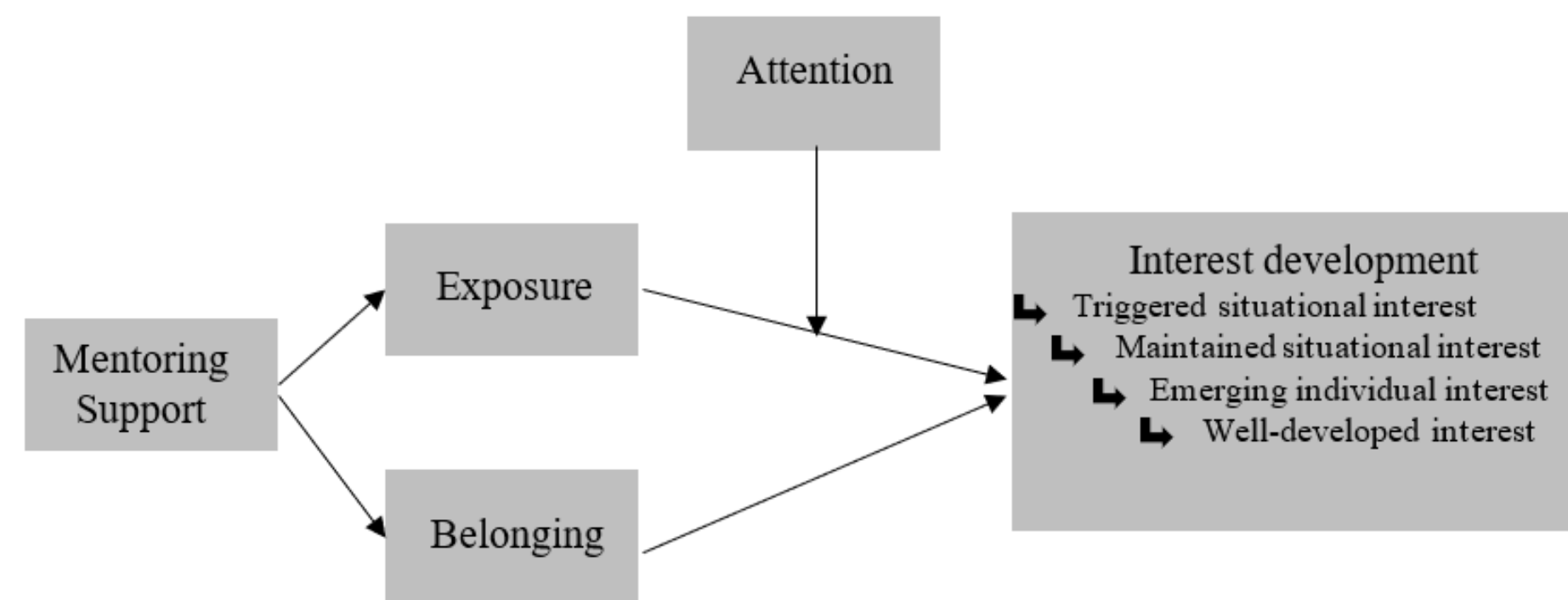


Figure 1. Theory model of support influence interest development.

Research question

1. Does sense of belonging mediate the relationship between mentor network diversity and interest in geosciences?
2. Does sense of belonging mediate the relationship between having a gender-match faculty mentor and interest in geosciences?

METHODS

Participants

- Sample size N=277
- First- or second-year female undergraduate students
- From nine universities
- From STEM majors and showed initial interest in geoscience

Measures

- **Mentor network diversity**
 - Mentor network diversity = Faculty + graduate students + peers + other college/university faculty members)
- **Gender matched faculty mentor**
 - “What is the gender of your faculty mentor?”
- **University sense of belonging**
 - “I am enthusiastic about attending my university.”
 - The scale scores are derived by the average of the eight items
- **Interest in the Geosciences**
 - “How interested are you in taking courses in Earth Systems or Environmental Sciences?”
 - The scale scores are derived by the average of the two items

RESULTS

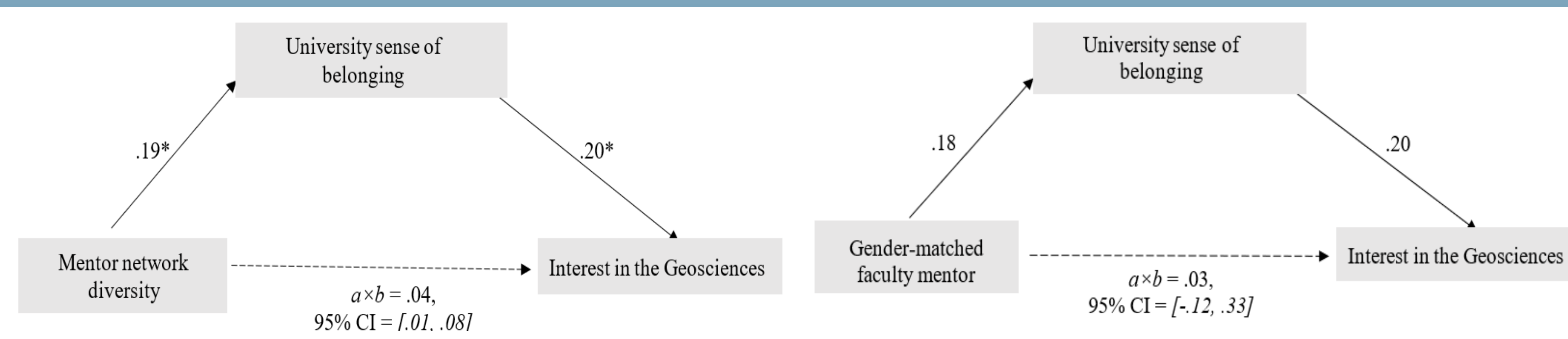


Figure 2. Mediation Analysis. The Effect of Mentor Diversity on Interest in the Geosciences through University Sense of Belonging.

Figure 3. Mediation Analysis. The Effect of Gender-matched Faculty Mentor on Interest in the Geosciences through University Sense of Belonging.

DISCUSSION

Significance of the study

- University sense of belonging was empirically examined as a mediator

Limitation

- Sampling issue
- Mentor network diversity did not reflect different roles of mentors

PRACTICE IMPLICATIONS

Diversify the role of mentoring

- Mentoring workshops
- Conference: meet expert from other universities or industries
- Encourage graduate student to become mentoring resources

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