A study of international students' language aptitude and adjustment under stereotype threat.

Rashmani Chakrabarty, Kathryn Chaffee, Nigel Mantou Lou, Kim Noels, University of Alberta

Introduction

Stereotype threat occurs when people feel they may be confirming negative stereotypes about their group. These people feel pressured to fight against the stereotype. However, that pressure may actually cause them to perform more poorly, thereby confirming the stereotype (Aronson, Lustina, Good, Keough, Steele, & Brown, 1999; Steele & Aronson, 1995). A specific example of stereotype threat was found in research by Spencer, Steele, & Quinn (1999). They found that female students performed more poorly on a math test after they were reminded of the stereotype that male students have a higher ability in math than females. Stereotype threat is not limited to women only. Males are also likely to feel stereotype threat in areas that are seen as feminine (Koenig & Eagly, 2005; McGlone & Pfeister, 2014). An area that can typically be seen as feminine is the learning of new languages. Consequently, with the large number of international individuals entering the Canadian population, there is a need to understand the effects of stereotype threat on language aptitude on the performance and adjustment of minority groups.

In this current study, we looked at the performance of male international students on language tests under a stereotype threat. We also be examined their self-reports on their adjustment to Canada under the stereotype threat. We have **two main hypothesis** that we will explore; **(a)** Male students who are in the threat condition will perform more poorly on the language aptitude tests that those students are in the non-threat condition, **(b)** students who are in the threat condition will feel less adjusted to Canada than students who are in the non-threat condition, and will have less confidence in themselves.

Method

Participants

N = 69 (40 non-threat condition, 29 threat condition) male international students enrolled in entry-level psychology courses at the University of Alberta who had lived in Canada less than 5 years.
Age: M = 21.51 years (SD = 6.015)

Materials

- 11 Questions items from the SAT (The College Board, 2014).
- Llama B Test (Meara, 2005).
- Rosenberg Self-Esteem Scale (Rosenberg, 1965).
- Measurement of feelings of competence at language aptitude tests (Ryan, 1982).
- Measures of Intercultural Contact:
  - "Frequency of visits to Canadian's homes" (1-7 scale).
  - "We will interact as equals" (1-7 Scale).

Procedure

All materials were administered via an online survey during group testing sessions of 1-8 students. In the threat condition, stereotype threat was induced by telling participants that the purpose of the study was to examine why women have higher language aptitude than men.
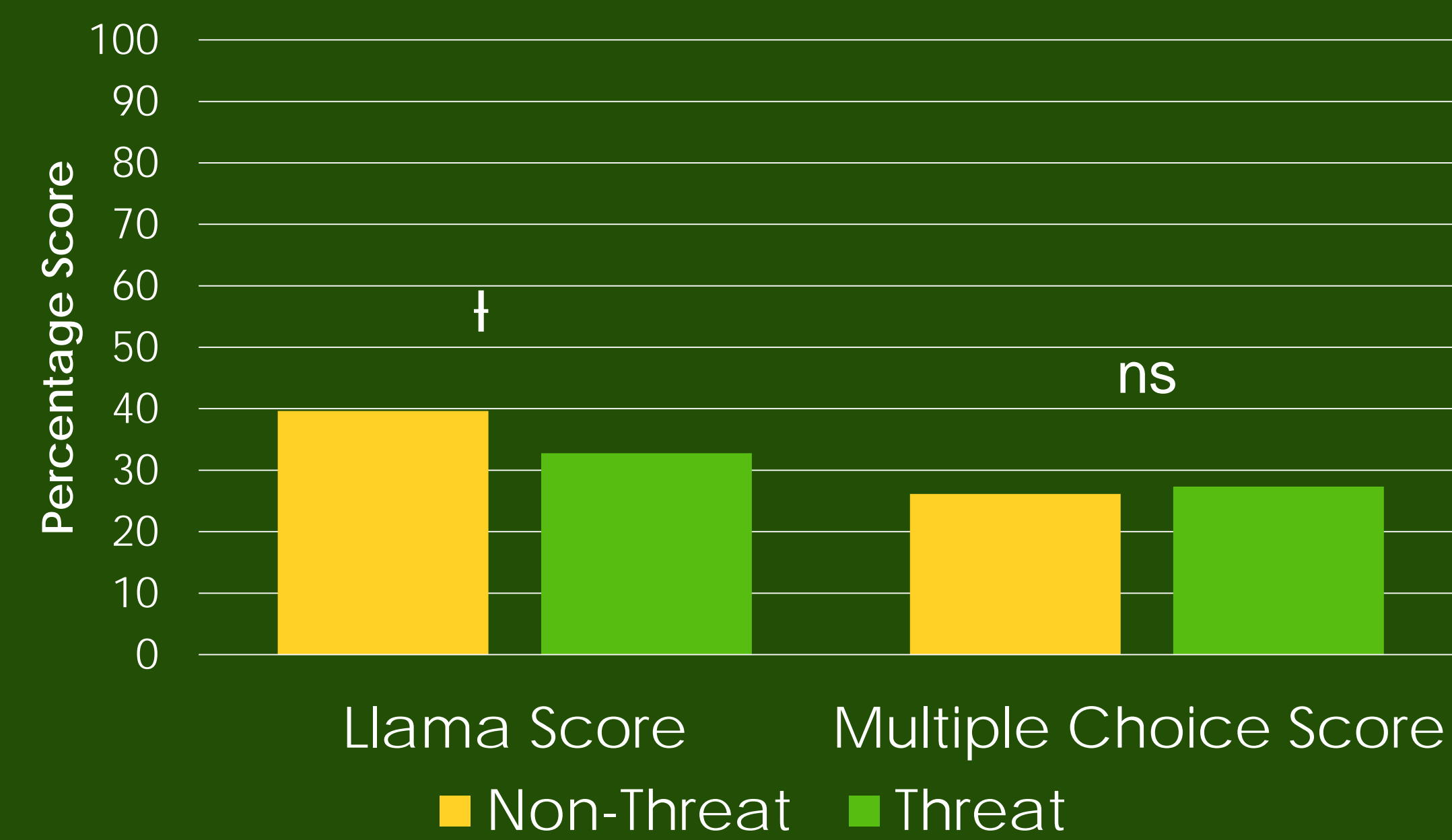
Results

Figure 1: The percentage scored by the threat and non-threat conditions on the Llama B test, and the SAT questionnaire.
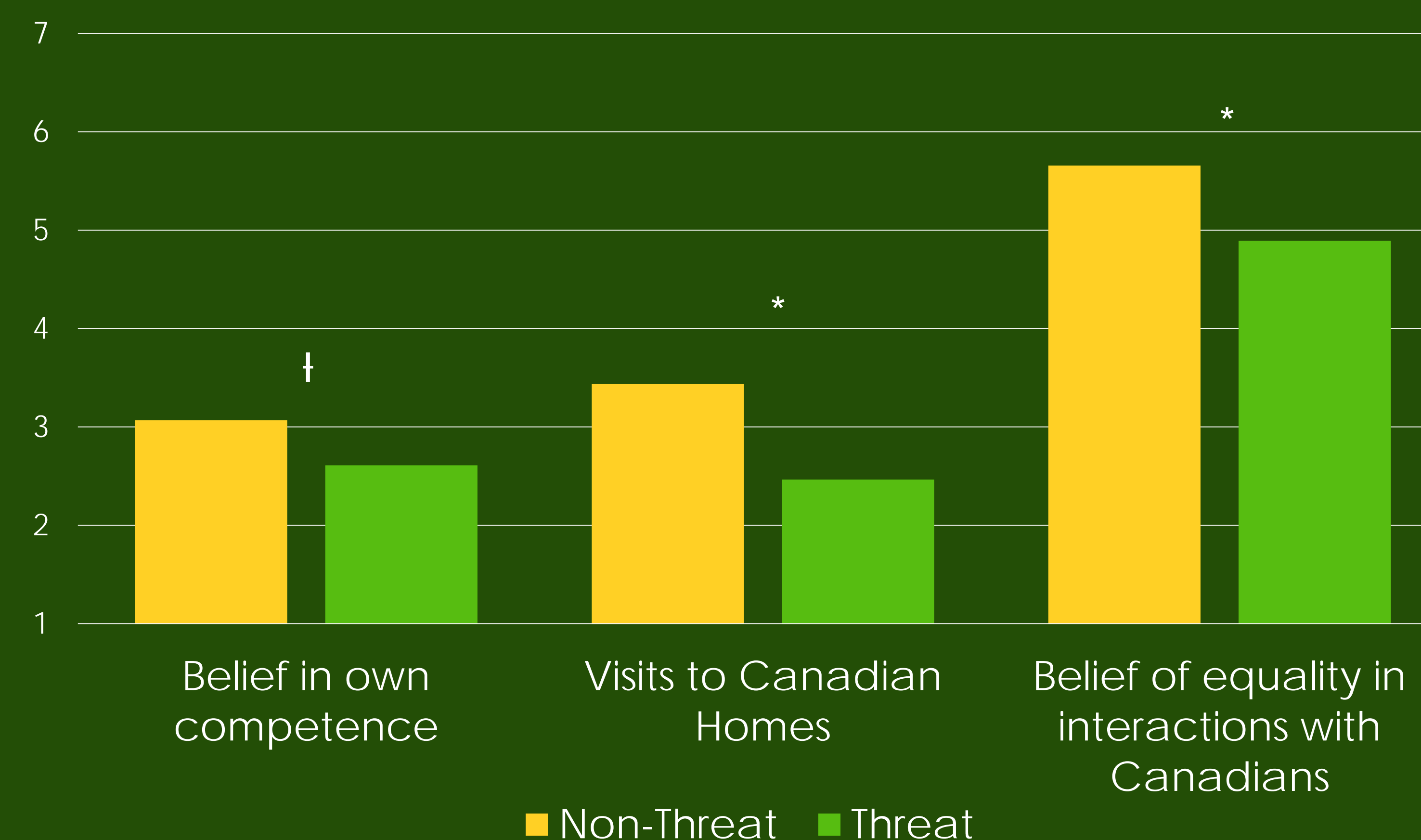

Figure 2: Ratings of Competence, visits to Canadian homes, and equality for threat and non-threat conditions.
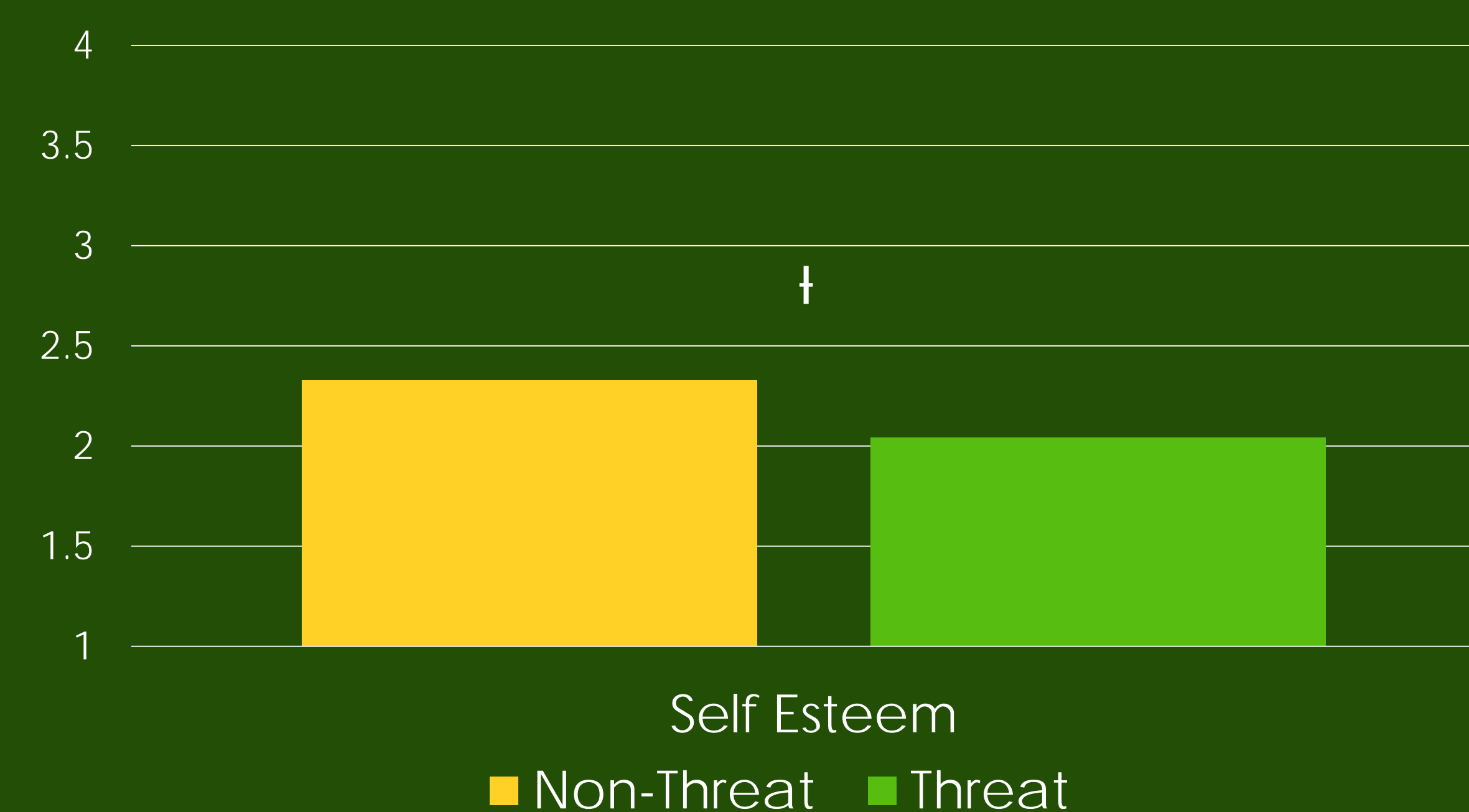

Figure 3. Ratings of self-esteem for non-threat and threat condition.

Results and Discussion

Results of one-way analysis of variance showed a non-significant trend for the Llama B test with participants in the threat condition performing more poorly than participants in the non-threat condition ($F(1, 65)$ = 2.85, p= 0.096). The results of the SAT questionnaire showed no significant difference, with individuals in the threat condition performing slightly better than individuals in the non-threat condition (p=0.785). However, in agreement with hypothesis b, there was a marginally significant trend towards threat effects on self-esteem and feelings of competence. Students in the threat condition reported feeling marginally less competent ($F(1,67)$=3.04, p=0.086) and having marginally lower self-esteem ($F(1,56)$=3.61, p=0.063) than their non-threatened peers. Additionally, there was a significant difference in how frequently students visited Canadian`s homes, their feelings of equality in interaction with Canadians, and their belonging in the threat or non-threat condition. Students in the non-threat condition reported a higher likelihood of visiting an Anglo-Canadian's home ($F(1,65)$=5.25, p=0.025), as well feeling more equal in their interactions with Anglo-Canadians ($F(1,64)$=4.67, p=0.034).

There are some limitations to this study. The results of the SAT questionnaire showed a floor effect, indicating that the test may have been too difficult for the international students. For this reason, it might be advisable to use another test in place of this one. Furthermore, the final number of participants in the threat condition after eliminations due to suspicion or lack of attention paid to the independent variable manipulation were 29, which can be considered to be low. Therefore, in the future we may want to test more subjects for the threat condition.

Conclusion

Hypothesis A was partially supported by the Llama B test which indicated stereotype threat hurt the performance of students in the threat condition. However, the SAT test showed no difference between the threat and non-threat conditions. Hypothesis B was supported as participants in the threat condition reported lower levels of self-esteem, lower belief in one`s competence, lower likelihood of visiting the home of a Canadian, and lower feelings of equality when interacting with an Anglo-Canadian. This study showed that stereotype threat may not only have an adverse effect on a specific ability domain, such as language aptitude, but also on other areas of the immigrating populations' life, such as their self-esteem. This has powerful implications for the many new immigrants who are entering Canada every year, as stereotypes about their ability to learn languages may lower their self-esteem, belief of competence in learning a new language, and well as dissuade them from interacting with Anglo-Canadians. Furthermore, this concern opens up new questions for research such as what specific stereotypes are held about immigrants, and what effect do those stereotypes have on their adjustment to Canada. Another question that can be explored is how stereotypes about immigrant students affect their performance in post-secondary institutions.