



Resilience and Attrition of Women in Male Dominated STEM Occupations

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Introduction

- Women are greatly underrepresented in STEM fields such as technology, engineering, & physics (Cheryan et al., 2016).
- Societies with high rates of gender equality have some of the largest gender gaps in STEM education (Stoet & Geary, 2018). This gap in educational focus has led to misperception of ability based on gender.
- Variance in perception between intelligence and academic performance greatly stems from socialization by parents, teachers, and other areas of society.
- Disparate perceptions have likely led to high attrition rates of women in male-dominated STEM (Xu, 2017).
- **Resilience** → Broadly defined as being able to successfully adapt and adjust despite severe current life stressors (Egeland et al., 1993).
- Sagone et al. (2020) found that those with higher perceptions of self-efficacy & competence in problem solving skills had higher levels of resilience.
- By focusing on women's perceptions of ability we may be able to increase confidence and resilience despite various adversities. We may also be able to better assist women with lower levels of resilience in building up this protective factor & helping them pursue the career they desire despite various stressors associated with male-dominated STEM.

Hypothesis

- Based on past research, it is predicted that women with STEM degrees working in male-dominated STEM occupations will have higher levels of resilience than women with STEM degrees working in non-STEM occupations.

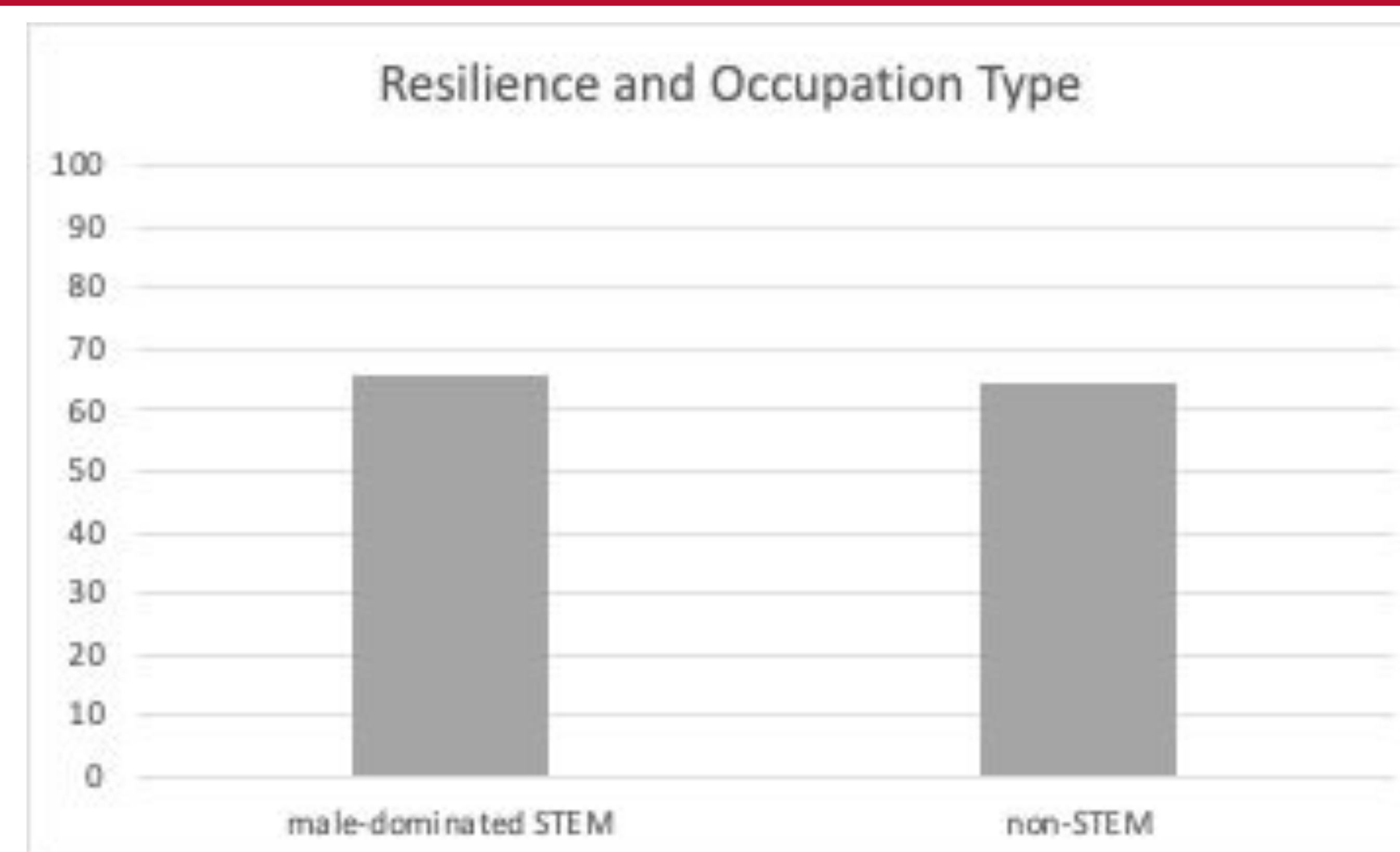
Participants

- 129 (*Mage*= 30.22, *SD*= 7.72) female social media users (17 Asian, 2 Black/African American, 5 Hispanic/Latino/Spanish, 2 Middle Eastern/North African, 94 White, and 9 Bi or multi-racial) were included in the preliminary analyses.
- 119 or 92.2% of participants work in male-dominated STEM & 10 or 7.8% work in non-STEM.

Methods

- **Procedure:** Participants recruited via social media (i.e., Reddit & Facebook) completed a survey which consisted of various demographic questions, as well as a self-report measure of resilience (listed below).
- **Measure: Connor-Davidson Resilience Scale (CD-RISC;** Connor & Davidson, 2003): The CD-RISC is a 25-item measure of psychological resilience ("I prefer to take the lead in problem solving"; "I have a strong sense of purpose"; "I think of myself as a strong person") rated on a 5-point Likert scale with higher scores indicating greater levels of resilience ($\alpha = .88$).
- **Predictor Variable:** Women were asked if they considered their work male-dominated STEM; from this response women were sorted into male-dominated STEM and non-STEM occupations.

Results



Results

- Based on preliminary analyses, there is no significant difference in resilience levels between women with male-dominated STEM degrees working in STEM versus women working in non-STEM, $t(127) = .31, p = .379$.

Discussion

- For the rest of data collection, the PI will be working toward recruiting more women in non-STEM fields as the number of women in male-dominated STEM is much greater.
- If this research is found to be significant, it would be beneficial to use more than one measure of resilience in the future to touch upon various aspects of perseverance and ability to adjust in the face of stressors. (e.g., GRIT scale, Duckworth et al., 2007).
- It may also be beneficial to use a scale of job satisfaction and workplace stress in order to control for various aspects of work life that may influence women's level of resilience and turnover intentions.
- Future research should also strive for more diverse populations of women.
- The hope for this research is to add to previous explanations of attrition and turnover intention rates of women in male-dominated STEM. If it is found that resilience may act as a protective factor, we may be able to assist women in building their resilience from a young age.

References

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