

Introduction

- **Green space:** an area of grass, trees, or other vegetation set apart for recreational or aesthetic purposes in an otherwise urban environment.
 - Benefits include increased mental ¹and physical health,² habitat for wildlife ³, water purification ⁴, and other ecological functions in urban areas.
 - Also provides aesthetically pleasing areas and creates opportunities for community gathering and events.
- Perceptions and knowledge of green spaces can vary heavily, which may impact volunteerism. ⁵

Objectives

At Kansas State University (Manhattan campus) we sought to:

1. Understand perceived green space benefits by various groups.
2. Understand ecological literacy of green spaces by various groups.
3. Understand how perceptions and knowledge of green spaces impact likelihood of volunteering in green spaces.



Figure 1: Example of green space at KSU (Image courtesy of K-State Communications and Marketing).

Methods

- Conducted literature search on green spaces and collaborated with experts to determine benefits categories.
- 3-7 questions per objective to ask participants in Survey 123 (ArcGIS).
- Questions asked about prioritized benefits of green spaces, volunteerism, and ecological literacy (both self-reported and tested).
- Administered survey electronically to K-State members via club chats, emails, and social media.
- Received 172 total responses over 9 days.



Figure 2: Illustration used in survey where respondents select their preferred green space.

Results



Figure 3: Free response prioritized values vs. formally selected top 3 responses. Respondents prioritized green spaces with high environmental value in free responses, but high aesthetic value in formal responses.

- 62% of respondents felt that there were not enough green spaces on campus at KSU.
- 53% of respondents selected image 4 (“naturalized green space”) from Fig. 1 as their preferred green space to spend time in.
- 43.7% of respondents had high knowledge on the ecological function of green spaces, and over 75% of respondents received education on the impacts of native vegetation.
- Only 3 of 172 respondents had volunteered in green spaces at KSU, and only around 6% said they knew about these opportunities.

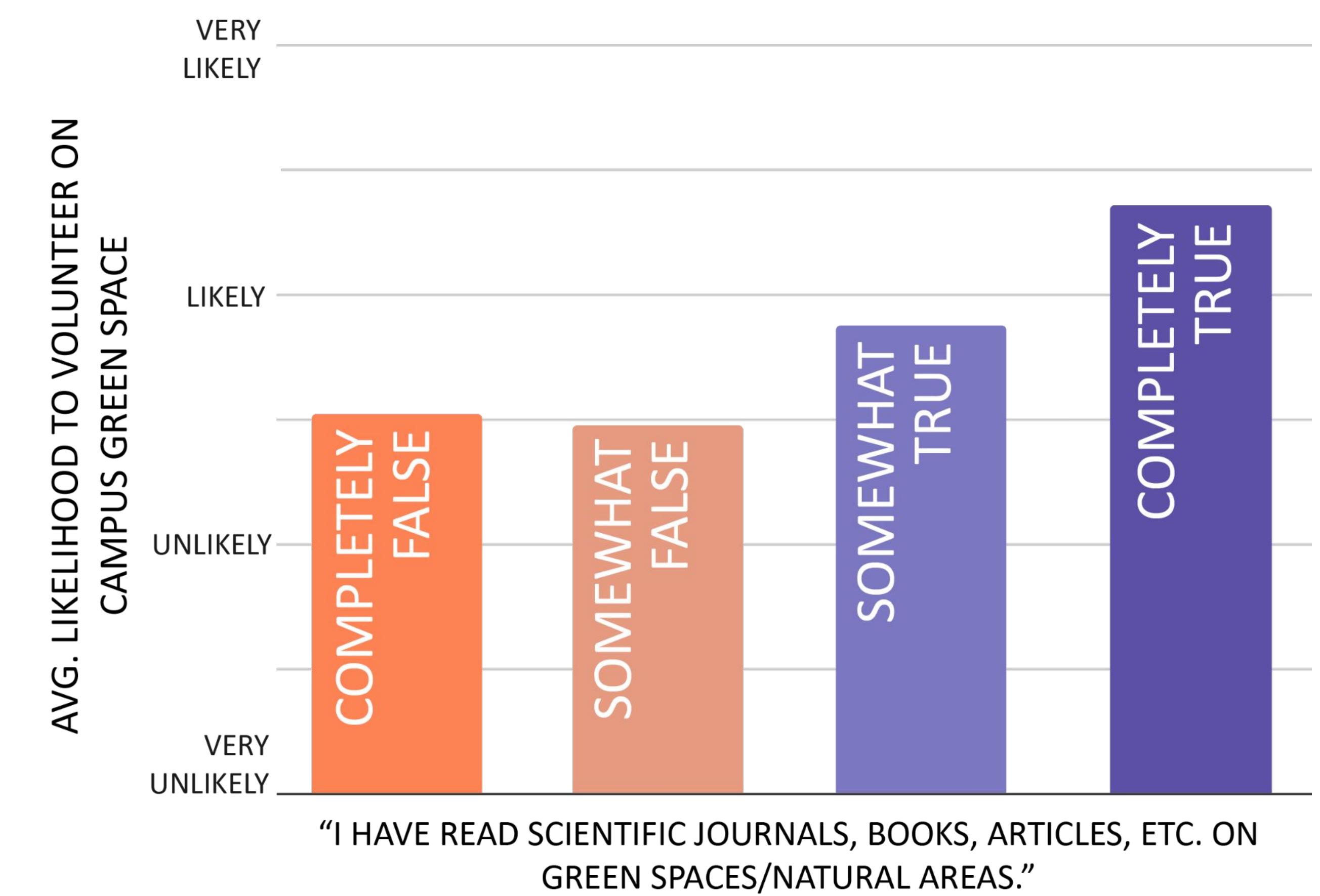


Figure 4: Likelihood to volunteer in campus green spaces vs self-reported literacy in scientific papers on green spaces. Self-reported likelihood of volunteerism was significantly impacted by self-reported scientific literacy ($p < 0.05$).

Discussion

Key Takeaways

1. Participants value aesthetics of a green space, though that does not mean they prefer areas with traditionally manicured landscaping.
2. Most respondents had a basic knowledge of green space ecological benefits.
3. Increased promotion of scientific literature may increase volunteering efforts. Scientific knowledge is a key motivator behind green space volunteerism.

Citations

- ¹ Wood, L., Hooper, P., Foster, S., & Bull, F. (2017). Public green spaces and positive mental health – investigating the relationship between access, quantity and types of parks and mental wellbeing. *Health & Place*, 48(48), 63–71. <https://doi.org/10.1016/j.healthplace.2017.09.002>
- ² Picavet, H. S. J., Milder, I., Kruize, H., de Vries, S., Hermans, T., & Wendel-Vos, W. (2016). Greener living environment healthier people? *Preventive Medicine*, 89, 7–14. <https://doi.org/10.1016/j.ypmed.2016.04.021>
- ³ MacGregor-Fors I, Escobar F, Rueda-Hernández R, Avendaño-Reyes S, Baena ML, Bandala VM, Chacón-Zapata S, Guillén-Servent A, González-García F, Lorea-Hernández F, et al. City “Green” Contributions: The Role of Urban Greenspaces as Reservoirs for Biodiversity. *Forests*. 2016; 7(7):146. <https://doi.org/10.3390/f7070146>
- ⁴ Bartens, J., Day, S. D., Harris, J. R., Dove, J. E., & Wynn, T. M. (2008). Can Urban Tree Roots Improve Infiltration through Compacted Subsoils for Stormwater Management? *Journal of Environmental Quality*, 37(6), 2048–2057.
- ⁵ Braçe, Olta, et al. “Gender Differences in the Perceptions of Green Spaces Characteristics.” *Social Science Quarterly*, vol. 102, no. 6, 18 Oct. 2021, <https://doi.org/10.1111/ssqu.13074>.