College Student Success:

Sustainable and biophilic housing contributes to academic and social success.

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Abstract

This study investigated whether students in North Dakota and surrounding states are struggling with mental health and what they view as important in their housing accommodations to be successful. Recent studies have shown there is a mental health crisis on college campuses across the United States. Many studies have shown the correlation between mental health and biophilic design, but few housing accommodations are incorporating biophilic design elements into their design solution. Our findings support that there is a mental health crisis on campus. Students also noted that being sustainable is important to them and they believe biophilic design contributes positively to their mood.

Purpose

Discover what college students in Fargo, North Dakota view as important in their housing arrangements and if students are struggling with mental health.

Methodology

- Electronic survey to North Dakota State University students via email link and personal Instagram accounts
- Survey targeted students 18 years or older and were attending or have attended college in the last 5 years
- The survey consisted of open-ended questions, 5-point Likert Scales, ranking, and multiple choice questions
- Questions on the survey pertained to academic success, mental health, housing, personalization of their living space, what they prioritize in amenities, and their perceptions on sustainability and biophilic design
- To help students become familiar with the term "biophilic design," we showed them pictures of the rooms below

Review of Literature

Biophilia

"Exposure to nature reduces heart rate variability and pulse rates, decreases blood pressure, lowers cortisol and increases parasympathetic nervous system activity" (Newman & Söderlund, 2017, p. 755).
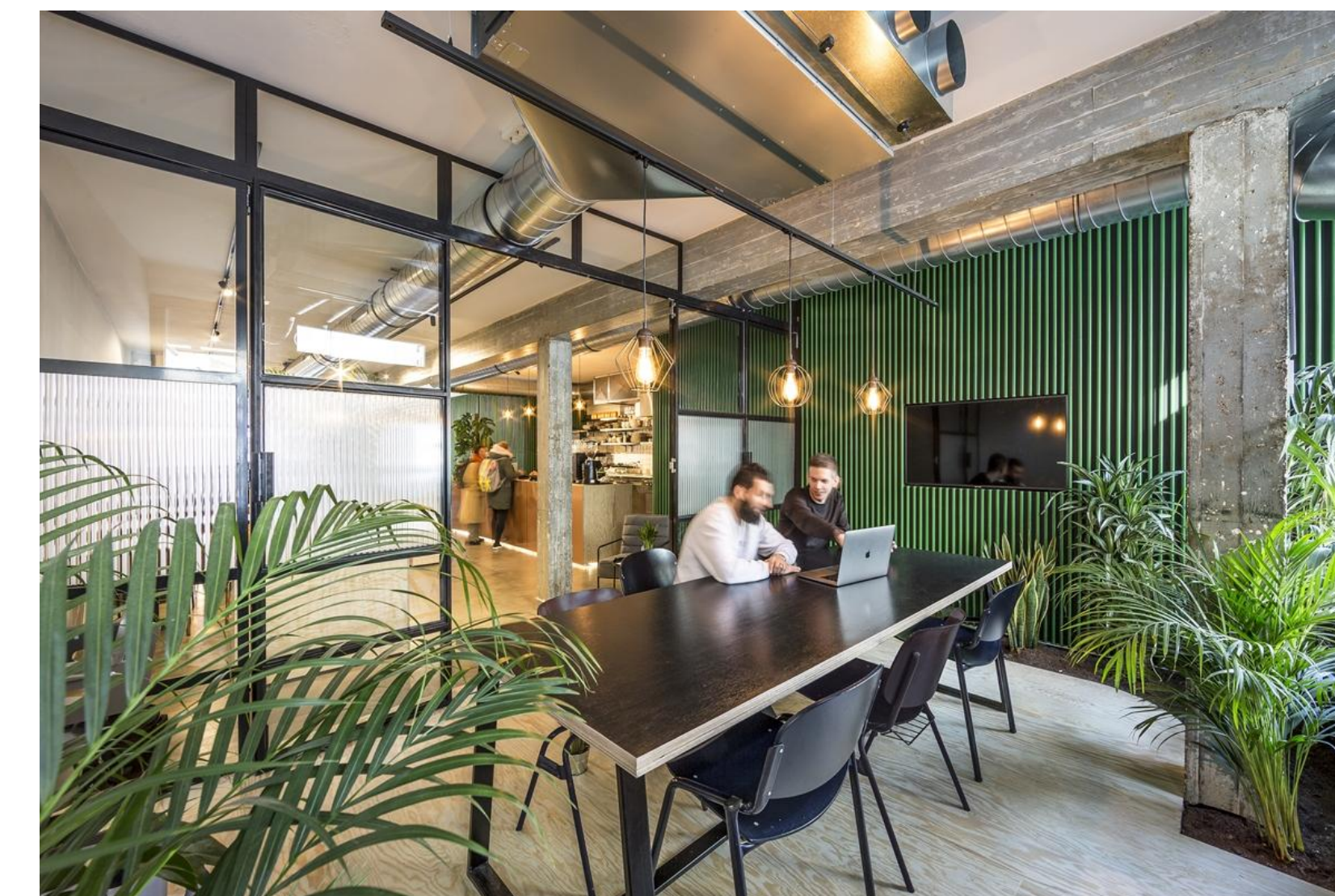
Sustainability

"Reuse eliminates unnecessary or irresponsible construction waste; helps upgrade the efficiency of existing buildings; and allows campuses to retain their architectural history, character and consistency" (Shimm, 2001, p. 144).

Sense of Community

"Students in housing that affords more frequent social interactions tend to have a greater sense of community and more positive academic outcomes." (Meagher, 2020, p. 30).

92%

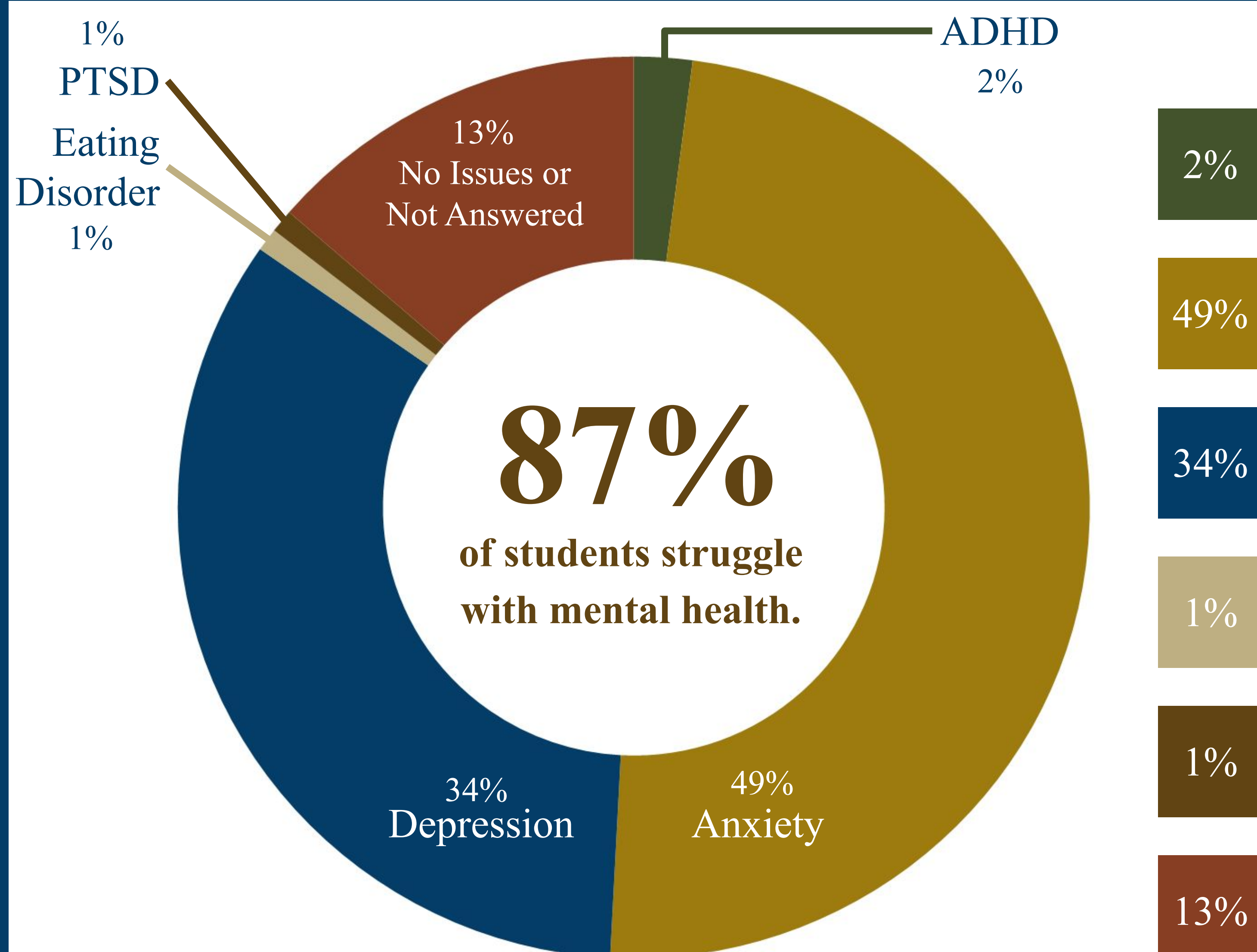of students believe biophilic design contributes positively to their mood.

Biophilic Designed Room

Non-Biophilic Designed Room

Results & Applications

Neutral 8% | **Somewhat Agree 22%** | "Direct access to nature is important." **Agree 69%**

- Students said sustainability is important to them, and 81% want to learn more about living a sustainable lifestyle.
- Surprisingly, 3/4 of students agreed that saving water was important, but only 42% conserve water during their everyday chores.

87.6%

of students say living a sustainable lifestyle is important.

Future Considerations:

- Create smaller, more affordable units to allow students to live on their own.
- Encourage personalization to provide a sense of belonging.
- Distribute surveys to more diverse population for cultural considerations in the home.

Most Important Amenities Among College Students

1. Business Lounge
2. Outdoor Space
3. Gym
4. Private Study Room
5. Meditation/Yoga Room

Natural light and biophilic design should be incorporated into student housing to help combat mental health issues. Here are some easy ways to incorporate biophilic design in your own home:

Aquariums, potted plants, natural fiber rugs, and images of nature.

87%

of students struggle with mental health.

- ADHD 2%
- 1% PTSD
- Eating Disorder 1%
- 13% No Issues or Not Answered
- 49% Anxiety
- 34% Depression

2% / 49% / 34% / 1% / 1% / 13%

Mental Health Issues Among College Students

References

Meagher, B. R. (2020). Seeing yourself in your room: The relationship between undergraduate flourishing and identification with student housing. *Journal of College & University Student Housing, 47*(1), 28-43.

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Shimm, J. (2001, August). Sustainable campus housing. *American School & University, 73*(12), 142-144. https://link.gale.com/apps/doc/A78544844/PROF?u=ndacad_58105ztrn&sid=bookmark-PROF&xid=6aed213f