

# P-37 | How Perceived Campus Greenness and Walkability Influence Psychological Distress Among College Students



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**Background.** While recent literature highlights the significant impact of green infrastructure on health-related behaviors and outcomes (Van den Bosch & Sang, 2017), research has yet to adequately explore the campus environments (both built and natural environments) in higher education. This gap is particularly crucial among college students, who frequently experience various mental health challenges due to stressors like academic pressures, environmental/social changes, and financial burdens (Oswalt et al., 2020).

**Objectives.** This study aims to explore the critical roles of campus environments in enhancing mental health and provides insights into the design and management of these environments to support, improve, and restore student health and well-being. The primary objectives are to 1) investigate the relationship between perceived campus environments (i.e. campus greenness and walkability) and students' psychological distress (PD) and 2) identify the mediating roles of campus life experiences including university stress (US) and academic life satisfaction (ALS) within this relationship.

**Methods.** Our research team developed and distributed a survey to students at Texas A&M University, including 409 respondents from various academic disciplines. PD was measured with Kessler 6 screening for non-specific distress scale (Kessler et al., 2002), while US and ALS were measured using the University Stress Scale (Stallman & Hurst, 2016) and the Academic Life Satisfaction Scale (Nogueira et al., 2019), respectively. Perceptions of campus greenness were evaluated using a 4-point Likert scale (strongly disagree (1) to strongly agree (4)) based on 1) the presence of many trees along the streets/paths, 2) a good view of nature or green spaces; and 3) a good accessibility to nature or green spaces, while the perceived campus walkability was measured by 1) a good quality of walking or bicycle path; and 2) the presence of many places to go within easy walking distance. Structural equation models were employed to explore the direct and indirect relationship between campus greenness/walkability and students' PD while controlling for significant confounding variables including sociodemographic characteristics and health conditions.

**Results.** Results indicate that 1) both perceived campus greenness and walkability significantly mitigate PD, 2) US and ALS were significant mediators within the relationship, with one pathway impacting PD through campus greenness/walkability, ALS, and another through campus greenness, US, and ALS, and 3) significant pathways were identified where campus greenness/walkability impact ALS through PD.

**Conclusions.** This study contributes to the existing literature on how campus environments affect students' PD, emphasizing the protective role of campus greenery and walkability as well as the mediating roles of students' campus life experiences. This offers valuable insights for campus planners and policymakers on developing a supportive environment that mitigates student mental health issues and enhances academic life.