

University of North Carolina Asheville
Community Engaged Scholars
Asheville, North Carolina
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The Implementation of Safe Sleeping Spaces on a University Campus

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Introduction:

Many university residents work on academic and extracurricular projects or jobs to the point of exhaustion. While the campus of the University of North Carolina at Asheville (UNC-Asheville) is smaller than some, one still must traverse distances either to their car or residence hall for rest in this state. Neither of these options is the safest solution, but currently are the only options.

The lack of quality sleep and/or rest is a common denominator in a wide spectrum of health issues including anxiety, depression, combativeness, and drug abuse.¹ For example the lack of attention, as well as mental, physical, and emotional health imbalances, share a common root in the lack of sleep. Neurochemical studies on the brain-derived neurotrophic protein have proven that it plays a role in the homeostasis of sleep.² In other words, low BDNF concentrations have been indicated experimentally in the increase of stress levels and decrease in sleep.² This protein, among others, is also correlated to insomnia, which is a prevalent characteristic in many stress-related disorders.² Other studies have proven that driving in certain states of mental exertion due to sleeplessness are equivalent to driving under the influence of drugs and alcohol.³ Additionally, depression, also linked to fatigue, has been proven to negatively affect student GPA's.⁴ Moreover, research shared with Education Department students has shown that after 2 hours of concentration, the brain loses approximately 10% of its maximum attention capacity every 30 minutes.⁵ Being that long term focus and concentration are a student's life, it is of utmost importance to encourage sleep or rest, especially to those exhausted. This is more easily achieved in a comfortable and secure place.

A specific sub-community of UNC-Asheville's campus that physically endures high levels of stress and further require sleep to allow their bodies time to recover are athletes. A study conducted by the researcher Baekeland had performed electroencephalograms (EEGs) of ten college athletes under three different conditions of exercise.⁶ The results suggested a generally directly proportional relationship between exercise and the amount of slow-wave (delta) sleep in one night as well as a stress effect of exercise obtained in the evening.⁶ Hence, a future goal could be to work with the Athletics Department in order to increase strategy,

perspective, diversity, and finances to provide more for the Asheville campus.

The goal of this recommendation is to increase the options of rest for students in order to holistically improve their lives mentally, emotionally, academically, and/ or physically. Hence, by providing safe, comfortable spaces in the community “hubs” of campus for both the residential and commuter student bodies to rest, this goal can be achieved.

Therefore, by implementing safe sleeping places in the most common social or studious “hubs” around a university campus, the array of campus subcommunities may benefit by allowing their brains to rest and regain the mental agility to drive home and continue studying or working more effectively among other activities.

Methods:

As a senior majoring in chemistry and studying mechatronic classes, sleep is my exceptional rescuer. I use the term “exceptional” as I would thrive off of getting more of it, if not much more. There have been many times when I have taken a nap in the library, Rhodes Robinson, Zeis, or the Sherrill Center in order to continue studying later into the night. I would have liked to felt more secure concerning myself and my belongings (such as phone, wallet, computer, and backpack) yet I was simply too exhausted to drive back home or to continue studying any longer. The creation of this product of secure sleeping spaces will help students struggling under similar conditions, and especially where academia may not be their only source of stress. Hence, my motivation to deliver this product to the communities interacting with the UNC-Asheville campus is driven by both personal present and past experiences in which I wish a safe, sleeping option had been available to me. It honestly would have made a life-enhancing difference. Maybe, for some, it could be life saving.

At this point, several organizations have tried to create sleeping spaces on campus, including in the library - the primary “hub” on campus. In the Fall of 2017, The Health and Counselling Center had worked in conjunction with the Ramsey library to create a “Sleep Health Week.” This entailed both locations, the library and Health and Counselling Center, setting aside a space for sleeping mats/pads to be placed on the floor open for use by students, faculty, and staff in addition to other campus subcommunities. After this event, two sets of surveys were sent to students concerning (1) the quality of the sleeping spaces, including what should be kept and what should be changed and (2) sleep health consisting of several questions such as the following: “*How many hours do you sleep on average per night?*”, “*Do you use any substances to stay awake or go to sleep?*”, “*Do you feel that naps are helpful?*” and, “*What does better sleep mean to you?*” The majority of the responses for the former survey encompassed the need for more accessibility, comfort, and privacy. Those who used the spaces did not like having their belongings unprotected in addition to sleeping on a thin pad on the floor next to others. However, these responses varied greatly depending on the individual’s experience. Even though this was not investigated, I surmise that respondents were influenced by their majors, having jobs and/or extracurricular activities, and emotional/social/mental stressors. The last question, “*What does*

better sleep mean to you?” was mostly answered by an overarching statement of feeling better and having an improved holistic life.

The goal of my project is in alignment with the previous attempt during Sleep Health Week, yet with a more consistent and longitudinal purpose. This project was initiated by UNC-Asheville’s newly founded Healthy Campus Initiative 2020, whose mission is to improve the services offered by the institution and customize it to the university communities’ needs. One of these services is to increase the accessibility and promotion of quality sleep.

The method I chose in strategically addressing this issue and opportunity was inspired by a study conducted by Brown, Qin, and Esmail.⁷ These researchers reported results and trends of a campus-wide survey determining students’ self-reported sleep patterns, sources of advice for sleep problems, current sleep promoting practices, and preferred mechanisms to receive new information assisting with sleep problems via an electronic survey.⁷ Upon initiating this Safe Sleeping Spaces project, I had just returned from teaching a cardio-kickboxing class at the FitExpo 2018 held in UNC-Greensboro’s new fitness facility, which provides two MetroNap Energy pods in their gym. Examples of these energy pods are shown below in Figure 1.



Figure 1. MetroNaps EnergyPod by Restworks⁸

I contacted the owner of Restworks, the company from which the MetroNap Energy pods are sold, and negotiated several options, including advertising, guest lecturing, and a discounted price of the pod from \$12,985 to \$8,995. This price, however, is beyond the resources of the newly founded initiative and strategically, this single, expensive pod would only serve one person at a time, thus, was not a feasible option. Additional disadvantages persisted as the pods lack the opportunity to secure one’s belongings and take up more space as well as being less

accessible to those in wheelchairs. Other, more economical, tactical, and accessible options needed to be investigated in order to create these safe sleeping spaces.

Consequentially, I contacted several other universities in the area including NC-State, Western Carolina, East Carolina, UNC Charlotte, and UNC Chapel Hill asking their Health and Wellness Departments whether they offered safe sleeping spaces on their campuses other than in residential halls, and if so, what options had they chosen.. Few responded, however, NC-State replied that they were currently undergoing construction of their facilities and were planning to create several designated individual sleeping rooms as they could afford the expense.

While searching through literature research, an article was published by The New York Times regarding the results and discussion of techniques implemented by other colleges in their on-campus sleeping spaces.⁹ Hence, the option of an individual sleeping room was further discussed; specifically, in the Ramsey Library silent floor where study rooms are located. Several ideas encompassed giving students the ability to rent out sleeping rooms with their university onecards as they do for study rooms: there would still be a time limit among other restrictions. The selected rooms would be the smallest that would fit one person each along with space for an outlet, a fan, and other items. An overpriced budget was produced containing a variety of items of comfort for each room ranging from basic necessities to additional items such as those that follow. This budget is listed below in Table 1.

Table 1. Overestimated individual safe sleep room budget

Item	Price with tax (and shipping if applicable)	Size/Type/Color	Company of Purchase
**Blow-up mattress	\$44.99	Queen	Walmart
Green Felt Carpet	\$37.24	5 yds	Online Fabric Stores
Sound Machine	\$30.45 (with Amazon Prime)	SS-4025/Blue	Amazon
Fan	\$26.96	N/a	Walmart
Chamomille & Lavander Spray	\$6.99	2 oz.	Walmart
**Black-out Curtain	\$7.00	Black	Walmart
**Curtain rod	\$9.63	28-48	Walmart
Command Strips	\$8.43	White	Walmart
Picture Frames	\$10.06	Set of 6	Walmart
**Hammock + Indoor Hammock Stand	\$42.29	Blue	eBay
Eye mask	\$2.00	10	eBay
Pillow	\$8.56	2	Walmart
Pillow Case	\$5.26	2	Walmart
Blanket	\$17.11	Full/Queen; Tan/Linen	Walmart
TOTAL COST	\$257.17		
COST OF NECESSARY ITEMS (**)	\$94.28		

The practicality of the sleep room is great as additional comfort items can be easily added and personalized, individual outlets would be available, and pictures taken by students could be hung around the rooms. Moreover, greater security is assured for belongings as well as the sleeping person. However, as construction is soon to begin in the academic buildings surrounding the Ramsey Library, faculty members are relocating their research quarters to such rooms and have priority.

Results and Discussion:

The ideas of providing free hammocks to campus subcommunities was discussed and resulted in the idea that not only should they be located outdoors on the campus quad, but also specifically within buildings of high-demand, such as the social and academic “hubs” of campus, the Ramsey Library and the Sherrill Center. The local hammock company in Asheville, ENO, was contacted to see if they would be willing to donate their services to this cause and we received no response. This was also the case for another brand of hammocks called Ticket to The Moon. As neither company replied, other options for hammocks were researched online and were found to be very economic and as cheap as \$20.00 with the same, if not higher, quality than the expensive ENOs. Furthermore, we set-up 2 hammocks and individual hammock stands, one in the library and the other in the Sherrill Center. The latter was purchased by myself for this project and the former was donated by a professor contacted via the Faculty Forum page. These hammocks are still standing along with posters briefly detailing the services offered by the Healthy Campus Initiative Safe Sleeping Spaces project and clipboards for students to sign their names showing their support. Tabling events were set up for a span of 2 days with times ranging from 10:00 a.m. - 5:00 p.m. on the campus quad in front of the library. These promotional times were implemented to further advertise the Initiative’s goals for this project, and to gain the crucial support and input of campus sub-community members, especially students, as they are the most predominant community on campus. During these events, 22 surveys were completed and 103 signatures were provided, including that of the Interim Chancellor, Joseph Urgo.

Other marketing strategies were used in addition to the creation and implementation of posters, flyers, brochures, Google Forms surveys, physical paper surveys, and emails. For example, this project has worked in conjunction with a variety of other organizations and institutions across campus disciplines. We have worked with the staff of the Ramsey Library to create a space and set-up the hammock and stand complex; the Health and Counselling Center, specifically, Kenda Mullert, the contact in charge of coordinating the Sleep Health Week events last fall and who shared the aforementioned surveys and her lessons learned; the Student Government Association (SGA), as I have met with Healthy Campus Intern and SGA member Lauren Bulla to discuss other marketing, funding, and location options (potentially expanding towards Highsmith Union post its construction); the Outdoor Programs of Campus Recreation, to utilize their trip staff to help table, prepare, and market these events while also getting paid to market their upcoming trips; and recently, the University Garden Director, to create grass-less

areas on the campus quad designated to permanently implement triple hammock stands in order to provide students with more locations in which to hang out, enjoy the Asheville environment, and sleep without deterring the integrity of the trees on the campus quad. Moreover, several faculty members of the Health and Wellness Department have offered assistance with the tabling events as extra credit in addition to filling out the surveys in such classes as HWP 323: Workplace Wellness, HWP 471: Advanced Biometric Testing, and others.

Overall, the feedback from the students, both residents and commuters, was very positive and indicated that this service would be used in high demand. This was further confirmed when the hammocks were set out on the campus quad during tabling events as they were constantly occupied as were the stationary hammocks located in the Ramsey Library and Sherrill Center.

Over the course of 12 days, the two hammock spots and the two tabling events with two additional hammocks provided a total of 164 supportive signatures and 34 surveys completed. The following figures (2-6) represent the responses to the surveys provided by students.

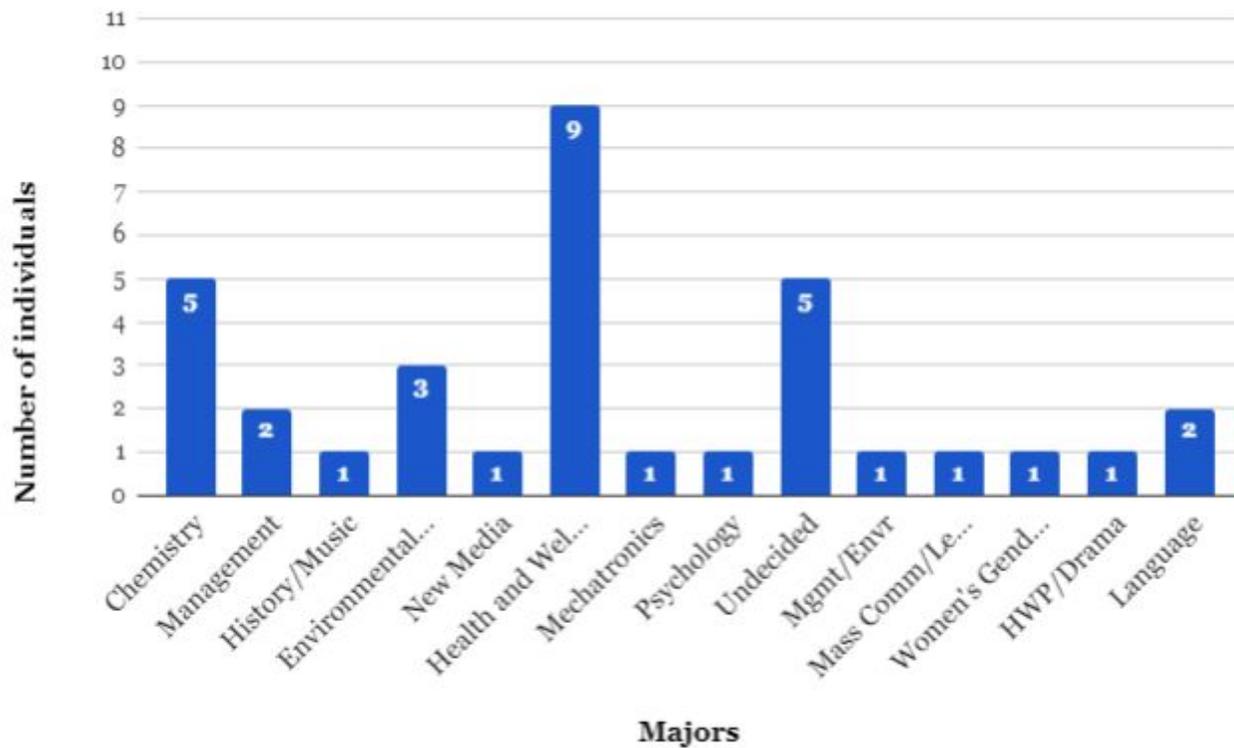


Figure 2. Diverse Distribution Across 17 Majors in Survey Sample

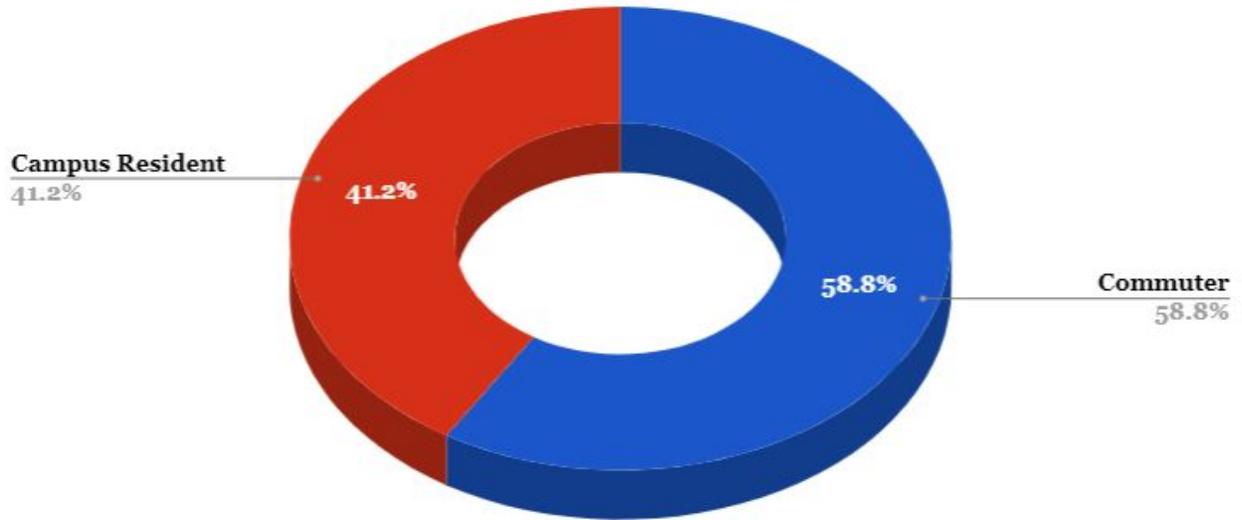


Figure 3. Campus Resident vs. Commuter Survey Sample

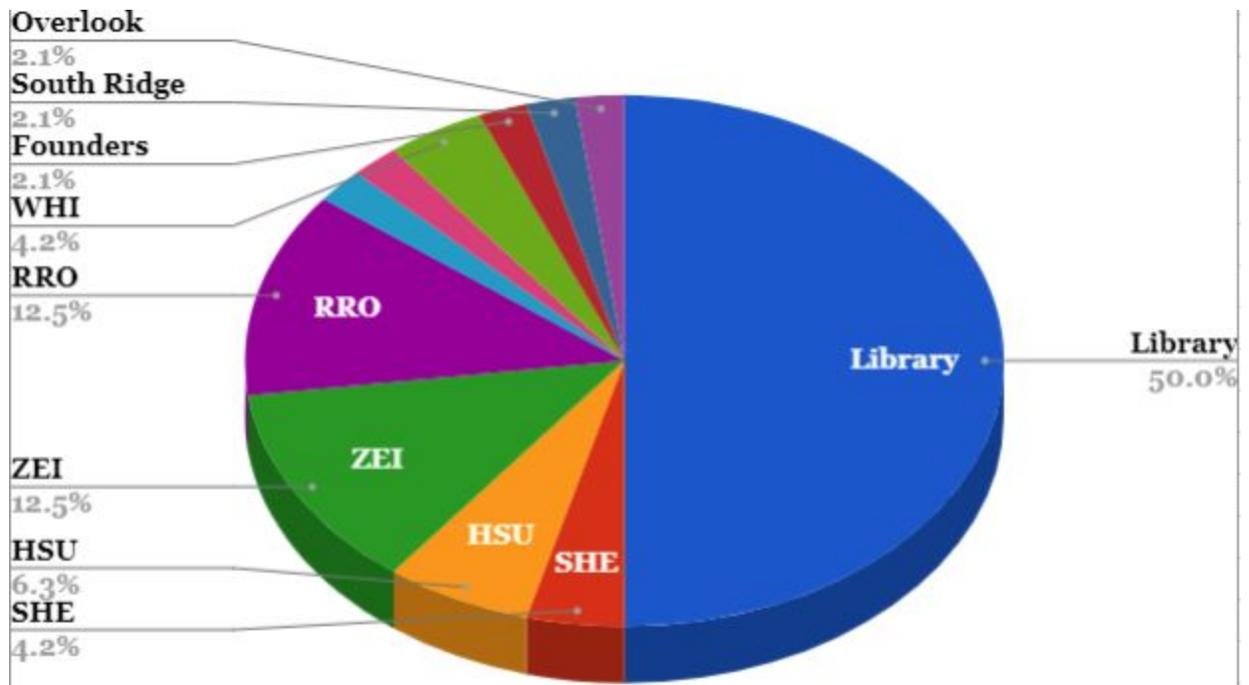


Figure 4. Most Frequently Used/Preferred Study Locations from Survey Sample

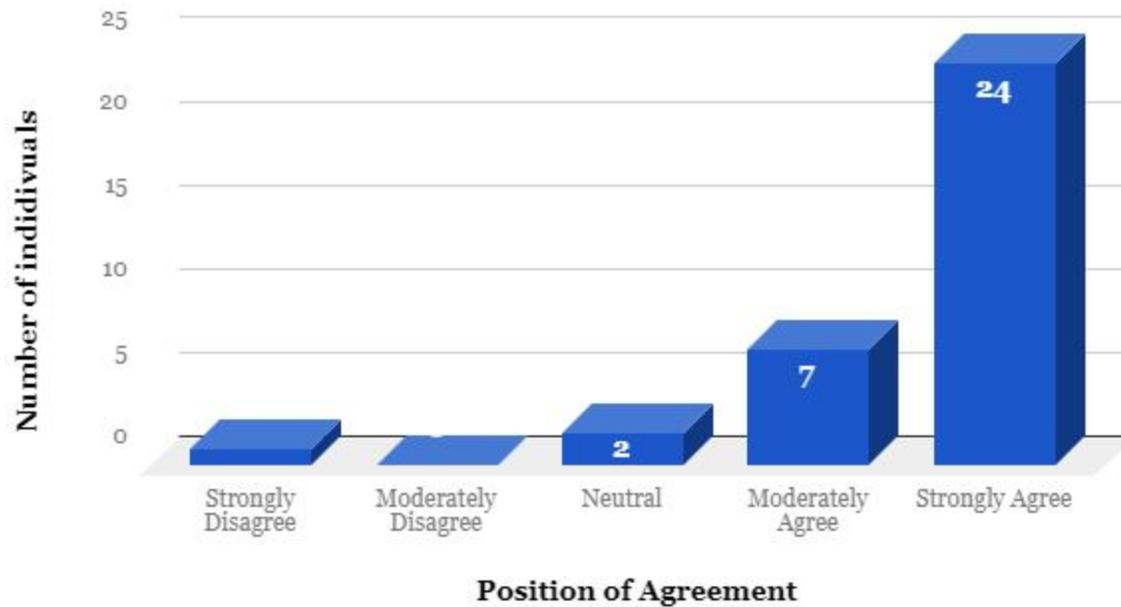


Figure 5. Survey Sample Individual Response to the question, “Do you think a sleeping space in these buildings would be helpful?” referring to the buildings listed in Figure 3

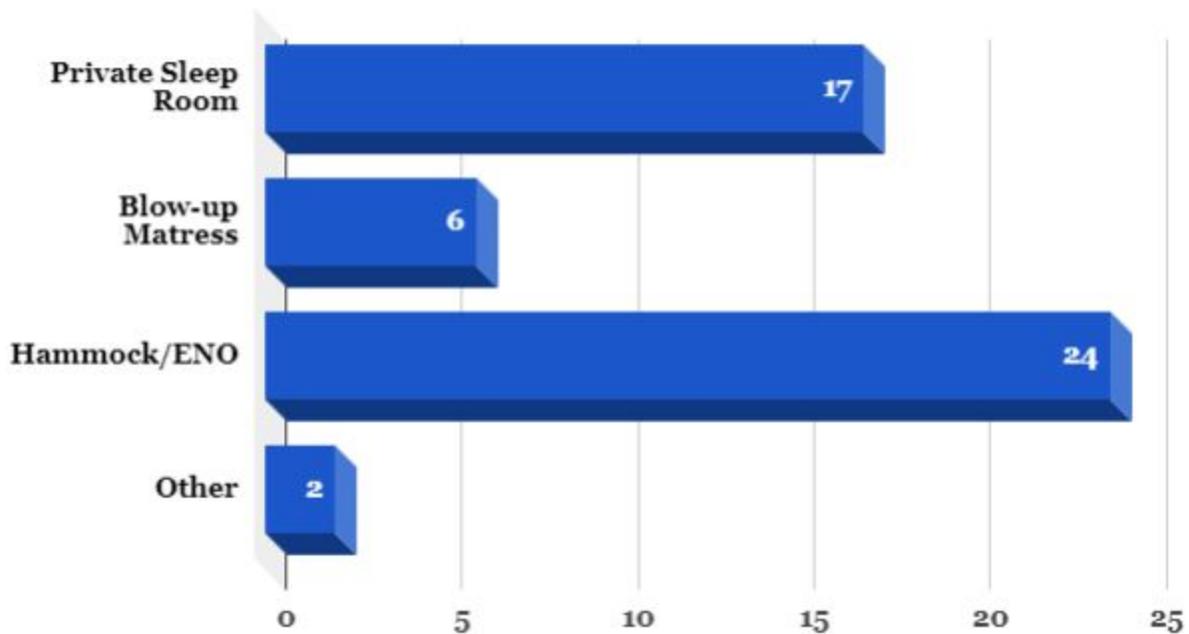


Figure 6. Preferred Method of Sleeping Space

The data clearly represents a general consensus that UNC-Asheville’s sub-communities want safe sleeping spaces, with a potential for high use at the library, and that their preferred method would be a hammock which is, fortunately, extremely feasible and can thus be purchased in higher quantities.

Conclusion:

With the overwhelming result of students in favor of these new sleeping spaces, the number of signatures and positive data collected reflect a distinct need for a sleep space on this university's campus. In the oncoming weeks, this data will be further processed and analyzed by the Healthy Campus staff, and shown to potential donors in the hope of acquiring funding a few established sleeping spaces around campus in both academic buildings and on the campus quad. Hopefully, UNC-Asheville will be able to invest more into this project as one of promoting public safety and wellness in the UNCA community in the future

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