

# Where Do Students Rest in MacEwan ▶ University?

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# Introduction

University and college students make common practice of napping.

The Circadian Rhythm affects your sleep/wake cycle

Sleep Restriction, Sleep Deprivation and Sleep Debt

- affects cognitive functions such as slower response times, bad impulse control, and impaired judgement.

Where do students rest?

# Literature Review

- ▶ Sleep debt up to 19 hours is equivalent to being drunk with a BAC level of 0.05 (two wine glasses).
- ▶ Morningness (early bird)-Eveningness (night owl) Questionnaire (MEQ)
- ▶ Napping restores metabolism, lowers blood pressure.
- ▶ MetroNap Energy Pods, PodTime Nap Stations, Nap Nooks
- ▶ Significance of Study- None have done a purely observational study on student populations and where they prefer to rest.



Figure 1. BAC of 0.05 equivalent



Figure 2. Eveningness (Night Owl)



Figure 3. MetroNap Energy Pod



Figure 4. PodTime Nap Stations

# Objective of Study

- ▶ To determine the association between the POST & POP'n and the factors of Time, Noise Level (Average), Location and Day
- ▶ **Hypothesis**
- ▶ At least 1 predictor for both POST and POP'N is significant
- ▶ **Variables**
- ▶ **Response:**
- ▶ Prop. of Seats Taken (POST), Prop. of People Napping (POP'n)
- ▶ **Predictor:**
- ▶ Time , Noise Level (Average), Location, Day

# Methods Part 1

- Went to locations 1, 2,3,4 and 5 in that order
- 1. The second-floor bridge (pedway) linking building 7 and 8
- 2. Paul Byrne Hall
- 3. The first-floor of building 7 entrance
- 4. The second-floor bridge (pedway) linking building 6 and 5
- 5. The first-floor of building 5

T & TH: 8:00 hours and 11:00 hours

M, W, & F: 14:00 hours and 16:00 hours

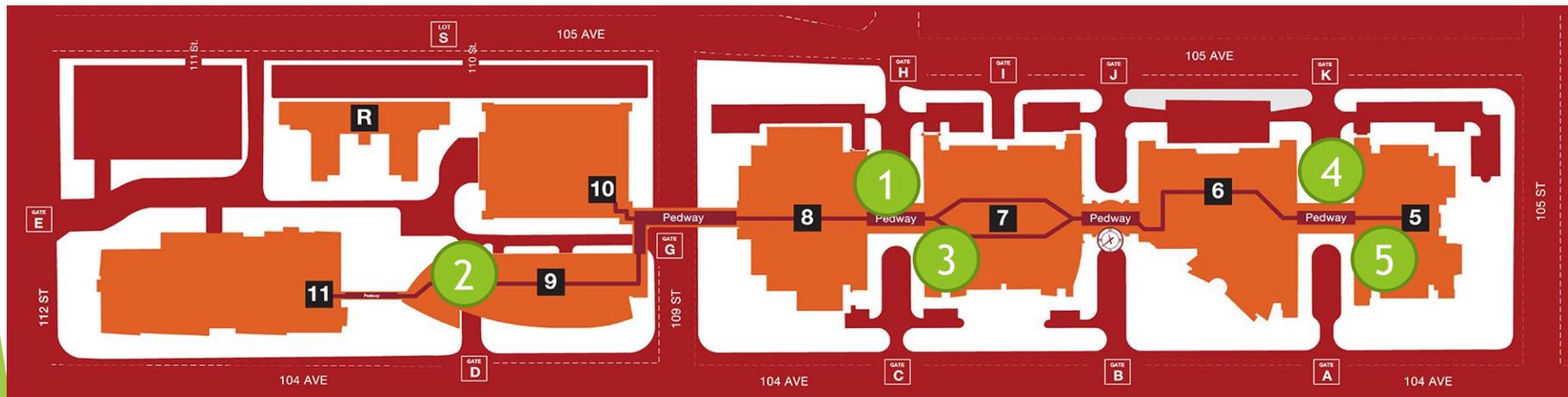


Figure 5- MacEwan University Building Location Map



## Methods Part 2

- ▶ Travel to 5 locations, 1 hour interval twice a day (except Monday)
- ▶ Record sound level for 1 min each location (stayed stationary at Pedways)
- ▶ Noted people napping and sitting in each area.
- ▶ Counted number of total seats in each area
- ▶ Data Analysis:
- ▶ SSPS Logistic Regression and Minitab Box-Plot & Interval Graph
- ▶ 5% significance level ( $\alpha=0.05$ )

# Result

Table 1. POST Omnibus Test and Model Effects

Source	Wald Chi-Square	Type III	
		df	Sig.
(Intercept)	1.555	1	.212
Day	7.192	3	.066
Location	204.965	4	.000
Timel	31.446	3	.000
Average	.613	1	.434

Dependent Variable: PropOfSeats  
Model: (Intercept), Day, Location, Timel, Average

Omnibus Test <sup>a</sup>		
Likelihood Ratio Chi-Square	df	Sig.
95.855	12	.000

Dependent Variable: PropOfSeats  
Model: (Intercept), Day, Location, Timel, Average

a. Compares the fitted model against the intercept

Table 2. POP'n Omnibus Test and Model Effects

Source	Wald Chi-Square	Type III	
		df	Sig.
(Intercept)	1.694	1	.193
Day	1.379	3	.710
Location	9.950	3	.019
Timel	2.673	3	.445
Average	3.498	1	.061

Events: Nappers  
Trials: People  
Model: (Intercept), Day, Location, Timel, Average

Omnibus Test <sup>a</sup>		
Likelihood Ratio Chi-Square	df	Sig.
40.323	12	.000

Events: Nappers  
Trials: People  
Model: (Intercept), Day, Location, Timel, Average

a. Compares the fitted model against the intercept

- ▶ n=59
- ▶ Nappers (POP'n)= 26
- ▶ Total (POST)= 1058
- ▶ Non-nappers=1032
- ▶ Logistic regression with SSPS
- ▶ Omnibus Test showed predictor for POST and POP'n significant.
- ▶ POST was significant with predictors location and time
- ▶ POP'n was significant with predictors location and maybe average (p=0.0668)

# Results

Figure 2- POP'n Boxplot vs time/ location

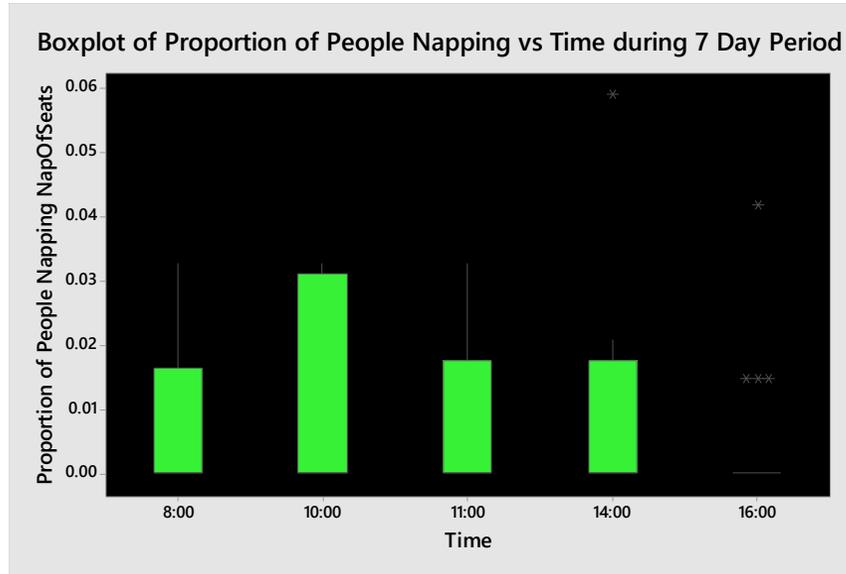
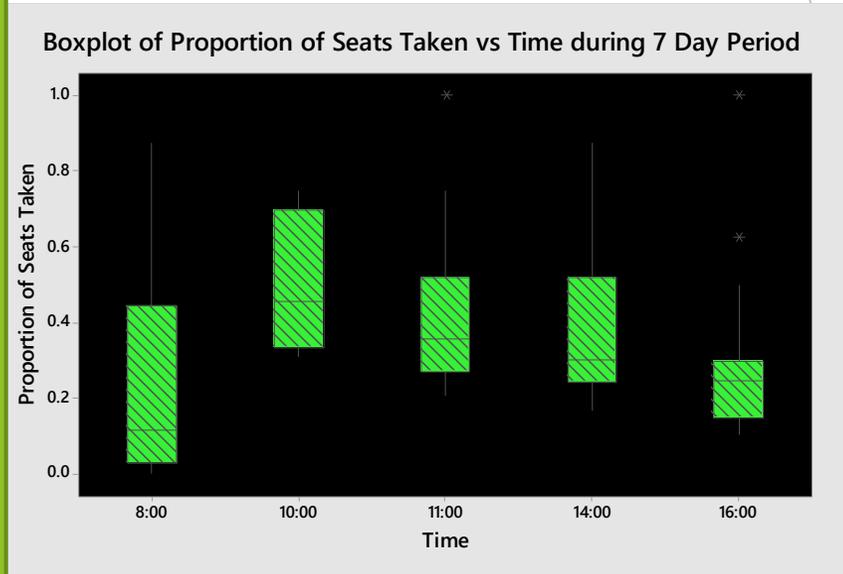
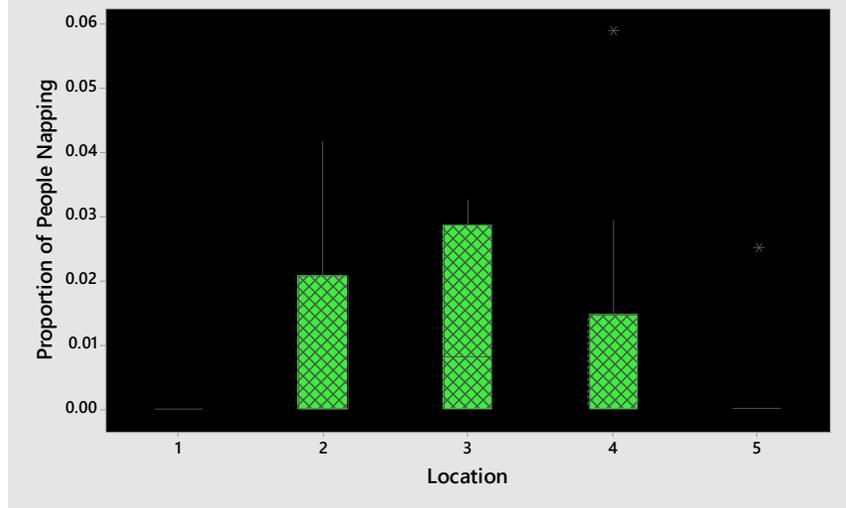


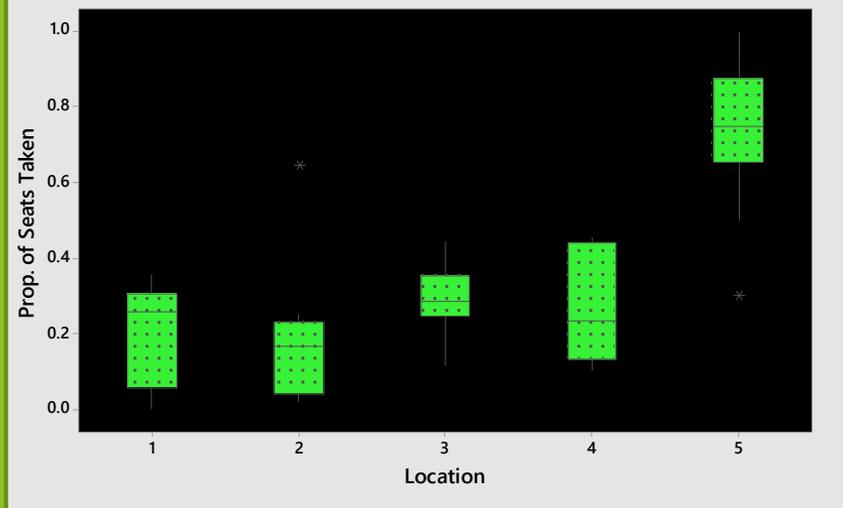
Figure 3- POST Boxplot vs time/ location



Boxplot of Proportion of People Napping vs Location during 7 Day Period



Boxplot of Proportion of Seats Taken vs Location during 7 Day Period



# Discussion

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For POST, location and time were significant factors

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For POP'N, location and maybe noise level (P=0.066) were significant

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Hypothesis proven- Omnibus Test

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First Floor Building 7 has most nappers.

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First Floor Building 5 has most POST

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Most seats occupied for POST and POP'n at 11:00 hours

# Conclusion

Predictors of time and location significant for POST

Predictors of location and possibly noise level (average) significant for POP'n

Hope this helps in understanding students needs in resting area's

## Recommendations

Future studies should find a way to analyze light in an observational study

Better sound equipment could be used

More areas can be added as potential resting area's

Mapping out locations can be very effective in presenting data

## Acknowledgements

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My SCIE 201 Classmates!

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My brothers Nicholas and Frederrick!

# References

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Questions?