Living Arrangements and Lifestyle: A Comparative Analysis of Students Residing with Families Versus Those Living Independently

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BY

Özgür Sinci 2429272

Ceren Şahin 2502367

Sude Konya 2502193

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ABSTRACT

The aim of this project is to perform a thorough comparative analysis of university students' lifestyles depending on their living arrangements, making a clear differentiation between students who live independently and those who live with their families. Essential aspects including academic achievement, social engagement, mental health, and time management for different activities are all examined in the study. The research uses statistical techniques, such as chi-square tests, t-tests, and some statistical graphs, to find possible correlations and significant differences between the two groups using survey data gathered from a METU student population. The results of this study provided illumination on the complex interactions between family support, and the many facets of university life, offering significant insights into the various impact of living arrangements on students' overall well-being. The results of this study will provide guidance to academic institutions that successfully create student assistance programs and enhance living conditions for students.

1. Introduction

Nowadays, a vibrant living environment for students is frequently combined with the quest of academic success. The living situation they occupy while pursuing their education is a critical factor affecting their overall development. This research conducts a comparative analysis to identify the observable differences in the standard of living between students who live in dorms and those who live at home. The choice of whether to live at home or in a dorm is complicated and influenced by a variety of variables. Examining the socioeconomic, psychological, and academic factors is neceessary to comprehend the subtleties of this decision.Demographic data, academic records, socioeconomic backgrounds, and survey responses assessing students' subjective well-being are among the information taken into account. This data set offers a great picture of the elements influencing students' quality of life in a range of living situations. The principal aim of this large-scale dataset collection is to identify the complex relationship between living conditions and students' quality of life. Through data analysis, our goal is to find trends, connections, and plausible causes that might guide actions, advice for academic institutions and decision-makers. Our primary goal is to provide insightful information that can improve students' academic performance and general well-being.We used a cutting-edge and effective data collection technique including the usage of QR codes to get insights into the quality of life experienced by students at Middle East Technical University (ODTÜ). By using QR codes, we were able to distribute our survey in an easy manner, which improved respondent engagement and simplified the data collection process. We have used some statistical methods including hypothesis testing, linear regression, and analysis of variance, were employed to achieve this goal with the data we have collected.

1.1. Data description

The data were obtained from a survey that we conducted over a specific period, obtaining essential information related to the comparison between students between students who stay with their families and students live on their own in terms of monthly expenses, sleeping habits

and differences in nutrition patterns. we have collected the data throught the campus with various student profiles such as different genders, different age groups and different

The dataset consists of 28 variables. These variables include categorical and numeric variables. We have 19 categorical and 9 numeric variables. We have used both Python and R to analyze our dataset.

1.2. Research questions

1.2.1 Is there a significant difference in average attendance of classes between students who have a CGPA less than 2.00 and who have a CGPA between 3.51-4.00?

1.2.2. Is there a significant difference in average of balanced diet between students who stay with their family and the others at %90 confidence level?

1.2.3 Is there a statistically significant difference in the time it takes for male and female students to return home based on their living arrangements?

1.2.4 What are the spending amount and type in expenses between students living independently from their families and those living with their families?

1.2.5 Is there a statistically significant relationship between students who are from different departments and class attendance and where they live during a semester? (live in home or dorm)?

1.2.6 Is there a significant difference in average attendance of classes between two student groups which are the ones who have a CGPA less than 2.00 and who have a CGPA between 3.51-4.00. The t test was used because the attendance of classes for each student group are independent and normally distributed.

1.2.7 Is there a significant difference in the amount of time students who live at home and those who live in dorms dedicate to themselves?

1.2.8 Is there a significant difference between accommodation satisfaction level among students who live at home or dorms?

1.2.9 Is there a significant difference in the amount of time for social life students who live at home and those who live in dorms?

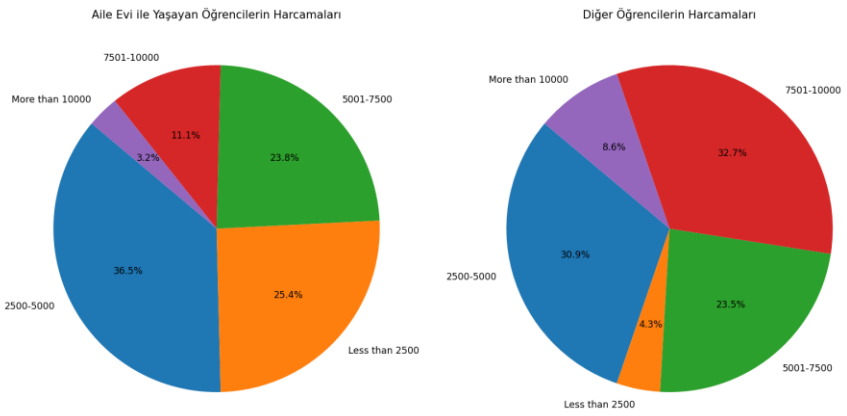
1.3. Aim of the study

The purpose of this study is to look at the relationships between the variables of our dataset that we conducted by our survey. Such as, between students who are from different departments and class attendance and where they live during a semester etc.. The purpose is to learn more about the relationship between where students stay, their balanced diet, how much money students spend on things like food, clothes, and fun, having more freedom or not. By examining these relationships, the study aims to contribute to a better understanding of the student's lifestyle. The findings will inform the institutions that are effective in developing support programs for students and improving student living conditions.

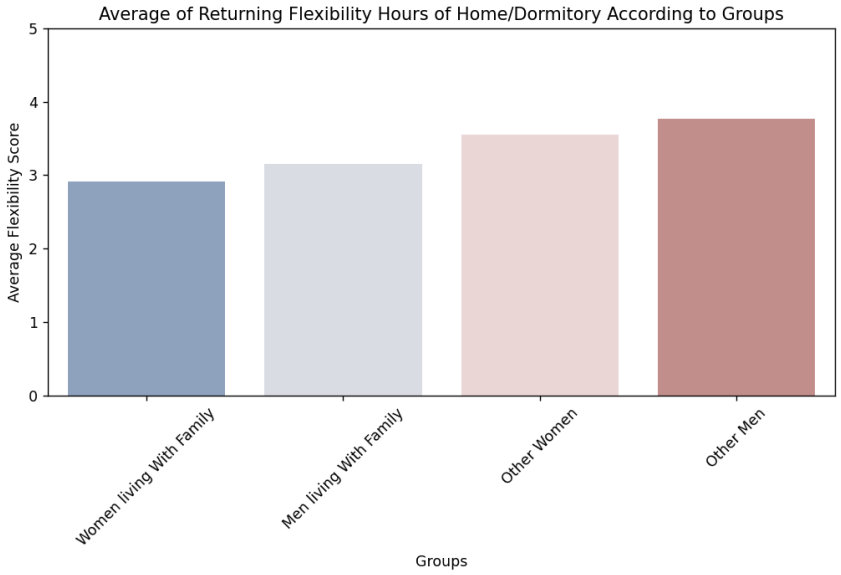
2. Literature Review

Our research provides significant insights into how college residence halls impact students' financial and academic lives. The study "A Closer Look at College Affordability: The Link between Living Allowances and Student Debt" from the Urban Institute shows how much students borrow and how much college expenditures are impacted by expenses like food and housing (Libassi & Mabel, 2022). Families can support students in achieving academic success. This could provide us with more information about students who live at home. The resource "Living On Campus vs. Living Off – For Families" from Pacific Lutheran University discusses the advantages and disadvantages of living on campus versus at home (Pacific Lutheran University, n.d.). According to all of these research, students' living circumstances have an impact on their spending patterns, academic performance, and social behavior. Therefore, in order to support students' academic success, policy makers and educators must have a thorough understanding of these issues.

3. Results and Findings



Our study shows that students living independently of their families spend more money than students living with their families (p-value ≈ 0.0000194). While students living independently of their families spend an average of 2907 TL on food and drinks, students living with their families spend 2055 TL. Even though students at home spend a bit more on clothes (1664 TL) than those not at home (1493 TL), the overall expenses are still lower for those living with their families. The money spent on entertainment does not differ much between the two groups. Students living independently from their families spend 1339 TL, and students living with their families spend 1188 TL. The reason for this high overall amount of money spent is that students who live independently of their families spend a lot of money on food and drink, and students who live with their families do not pay rent.



We found that restricted time to return home did not depend on gender. There is no statistically significant difference between male and female students living with their families (p-value = 0.4990) and there is no significant difference between male and female students living in other places (p-value = .540). On the other hand, there is a significant difference between male students who stay with their family and those who do not (p-value = 0.036), and a similar difference between female students (p-value = 0.0183). These values show that students living apart from their families have more flexible return home hours for both men and women.

```
        Welch Two Sample t-test

data:  balanced_diet_1 and balanced_diet_2
t = -1.8491, df = 74.15, p-value = 0.06843
alternative hypothesis: true difference in means is not equal to 0
90 percent confidence interval:
 -0.69619000 -0.03633688
sample estimates:
mean of x mean of y
 2.362903  2.729167
```

```
        Welch Two Sample t-test

data:  a1 and a5
t = -2.56, df = 21.185, p-value = 0.01817
alternative hypothesis: true difference in means is not equal to 0
95 percent confidence interval:
 -2.4708151 -0.2564576
sample estimates:
mean of x mean of y
 2.636364  4.000000
```

We wanted to learn whether there is a significant difference in average attendance of classes between two student groups which are the ones who have a CGPA less than 2.00 and who have a CGPA between 3.51-4.00. The t-test was used because the attendance of classes for each student group are independent and normally distributed.

H_0: There is no significant difference in average attendance of classes between the two student groups.

H_A: There is a significant difference in average attendance of classes between the two student groups.

The p-value is 0.01817 and alpha is 0.05. Reject H_0.

p-value is greater than 0.05, we would fail to reject the null hypothesis, indicating insufficient evidence to claim a relationship.

```
        Pearson's Chi-squared test

data:  contingency_table
X-squared = 12.26, df = 12, p-value = 0.425
```

For Engineers:

H0: There is no significant association between the engineer students' class attendance patterns with their place of residence (living in a dorm or at home)

HA: There is significant association between the engineer students' class attendance patterns with their place of residence (living in a dorm or at home)

p-value is greater than 0.05, we would fail to reject the null hypothesis, indicating insufficient evidence to claim a relationship.

```
        Pearson's Chi-squared test

data:  contingency_table
X-squared = 14.9, df = 12, p-value = 0.247
```

For students whose department is architecture:

H0: There is no significant association between the students whose department is architecture their class attendance patterns with their place of residence (living in a dorm or at home)

HA: There is significant association between the students whose department is architecture their class attendance patterns with their place of residence (living in a dorm or at home)

p-value is greater than 0.05, we would fail to reject the null hypothesis, indicating insufficient evidence to claim a relationship.

```
        Pearson's Chi-squared test

data:  contingency_table
X-squared = 11.866, df = 12, p-value = 0.4565
```

For students whose department is art and science:

H0: There is no significant association between the students whose department is art and science their class attendance patterns with their place of residence (living in a dorm or at home)

HA: There is significant association between the students whose department is art and science their class attendance patterns with their place of residence (living in a dorm or at

p-value is greater than 0.05, we would fail to reject the null hypothesis, indicating insufficient evidence to claim a relationship.

```
        Pearson's Chi-squared test

data:  contingency_table
X-squared = 16.661, df = 12, p-value = 0.1628
```

For students whose department is economics and administration:

H0: There is no significant association between the students whose department is economics and administration their class attendance patterns with their place of residence (living in a dorm or at home)

HA: There is significant association between the students whose department is economics and administration their class attendance patterns with their place of residence (living in a dorm or at home)

p-value is greater than 0.05, we would fail to reject the null hypothesis, indicating insufficient evidence to claim a relationship.

```
        Pearson's Chi-squared test

data:  contingency_table
X-squared = 8.1044, df = 12, p-value = 0.7769
```

For students whose department is education:
H0: There is no significant association between the students whose department is education their class attendance patterns with their place of residence (living in a dorm or at home)
HA: There is significant association between the students whose department is education their class attendance patterns with their place of residence (living in a dorm or at home)

H0: There is no significant difference in average attendance of classes between the two student groups.

HA: There is a significant difference in average attendance of classes between the two student groups.

p-value is smaller than 0.05 ,we reject to null hypothesis.

```
        Welch Two Sample t-test

data:  a1 and a5
t = -2.56, df = 21.185, p-value = 0.01817
alternative hypothesis: true difference in means is not equal to 0
95 percent confidence interval:
 -2.4708151 -0.2564576
sample estimates:
mean of x mean of y
 2.636364  4.000000
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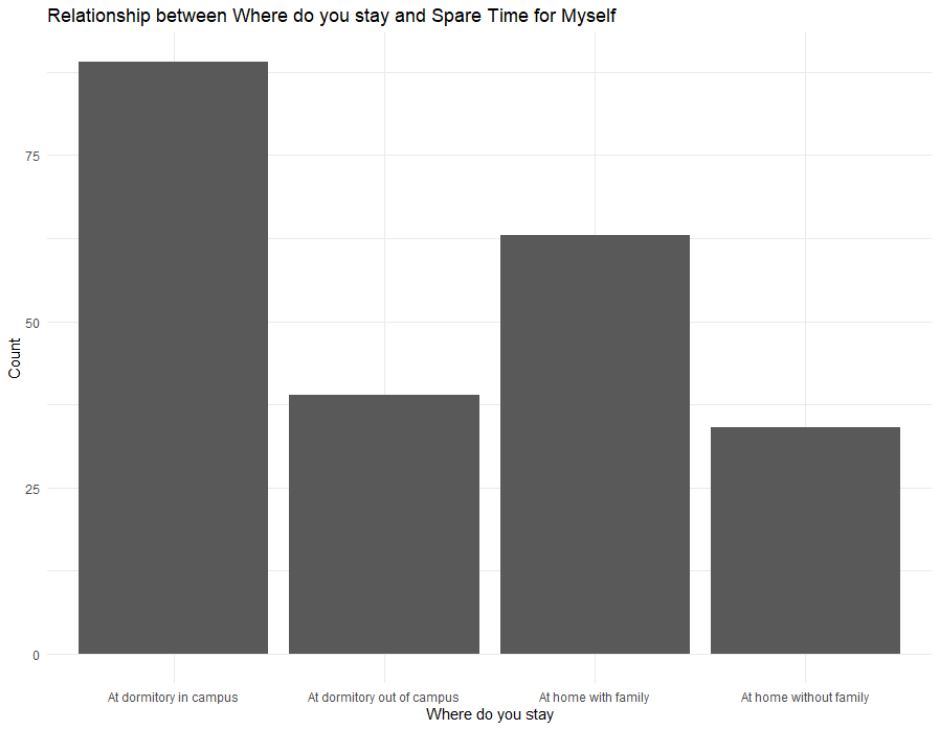
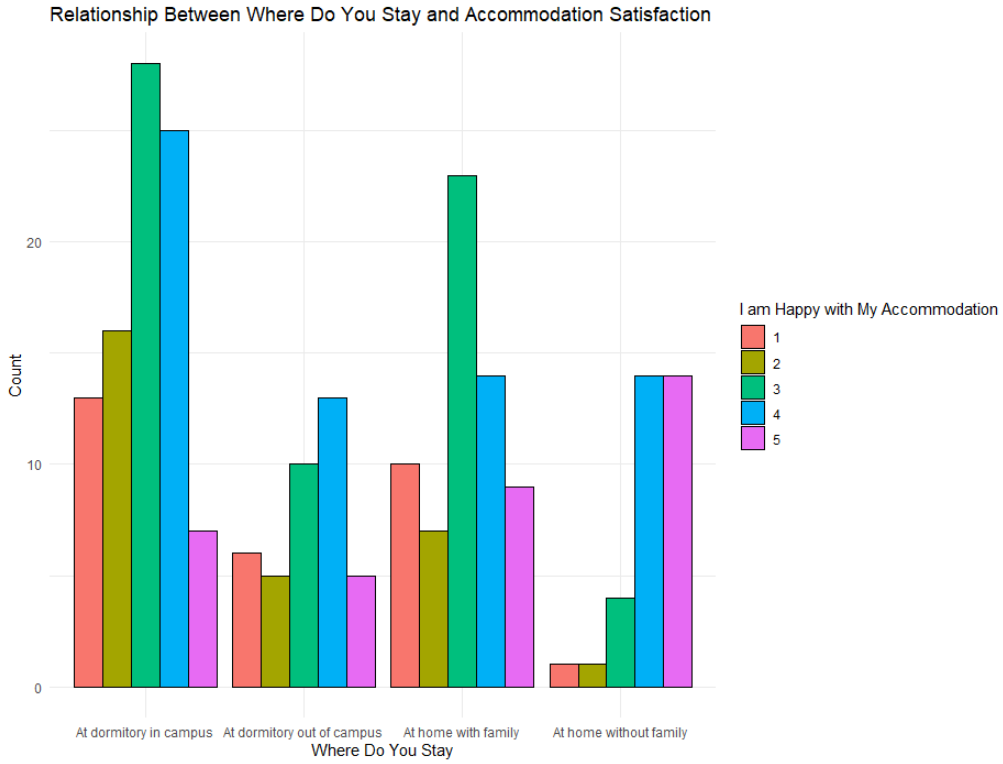
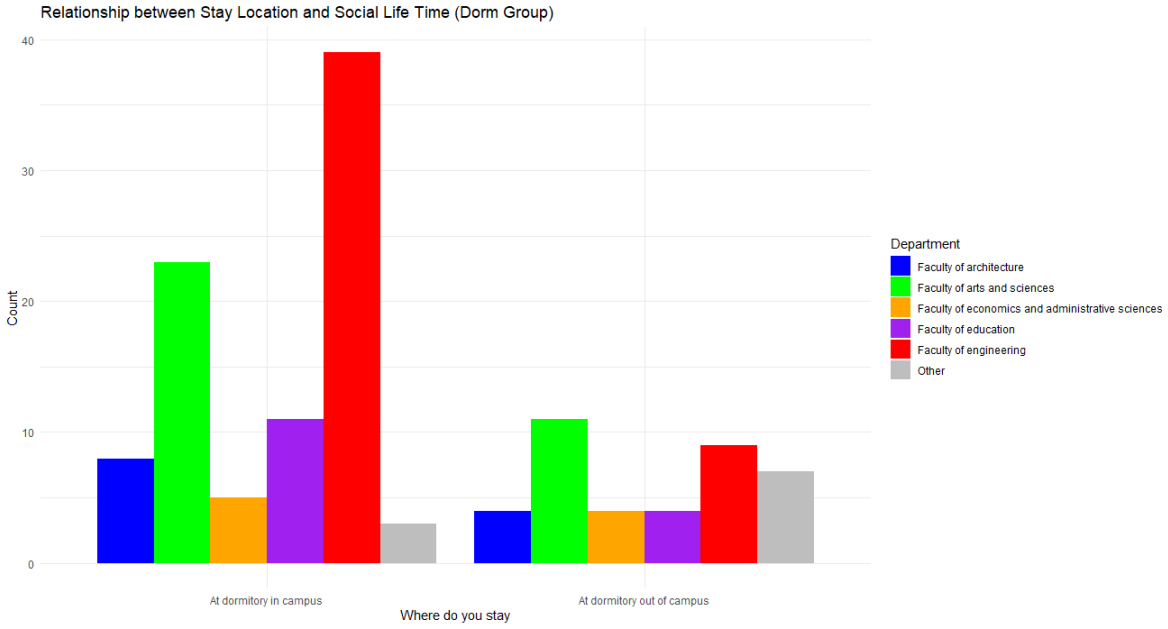


According to the graph, students who stay on campus can devote more time to themselves compared to students who stay at home.



According to the graph, students who stay at home are more satisfied with where they live compared to students who stay on campus.



According to the graph, among the students who stay in dormitories on campus, engineering students spare more time for social life, while those who study art and science spare more time for social life among students who stay off campus.

4. Discussion or Conclusion

To conclude, we have seen that we have enough evidence to reject that the average balanced diet of students between the two student groups with %90 confidence level. we have also enough evidence to reject that attendance of classes between two student groups which are the ones who have a CGPA less than 2.00 and who have a CGPA between 3.51-4.00 with %95 confidence level. Moreover, students from different departments show statistically significant differences in class attendance depending on where they live, with those who live on campus spending more time to themselves; furthermore, distinct satisfaction levels have been observed, indicating that students who live at home are more satisfied. Furthermore, engineering students living on campus and science and art students living off campus devoted varying amounts of time to social activities. Also, we note that students living independently may need more financial support or better planning to manage their expenses. The analysis revealed that gender does not play a statistically significant role in determining restricted time to return home for students living with their families or in other places. However, male and female students who live apart from their families have significantly more flexible return home hours, indicating that living arrangements can impact students' freedom of movement.

References

Pacific Lutheran University. (n.d.). Living on campus vs. living off – For families. Residential Life. Retrieved from https://www.plu.edu/residential-life/living-plans/on-campus-or-at-home/

Libassi, C. J., & Mabel, Z. (2022, July 8). A closer look at college affordability: The link between living allowances and student debt. Urban Institute. Retrieved from https://www.urban.org/research/publication/closer-look-college-affordability