Factors Influencing Student Satisfaction Ratings at the MAC
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INTRODUCTION
The purpose of this study is to determine if specific predictor variables influence the overall, qualitative, student rating (response variable) of the Math Assistance Center (MAC). This analysis will allow the MAC to reallocate resources to where they are needed most, thereby improving our primary services for students.

The following variables were investigated:
• Student wait time
• Tutor knowledge
• Whether a student received the help they needed after a session (yes/no)
• The frequency of student visits to the MAC throughout the semester

MATERIALS AND METHODS
The data for this study was obtained from the spring 2016 tutoring survey (self-reported) conducted by the MAC. The number of recorded observations was 156. A binary logistic regression model was fit with each of the predictor variables against the response variable using SPSS.

RESULTS

Table 1: Variables in the equation for the model with student wait time as a predictor.
<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>S.E.</th>
<th>Wald</th>
<th>Sig</th>
<th>Exp B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wait time (&lt;3mins)</td>
<td>3.356</td>
<td>.963</td>
<td>12.131</td>
<td>.000</td>
<td>28.667</td>
</tr>
<tr>
<td>Wait time 2 (3-5 mins)</td>
<td>2.565</td>
<td>.971</td>
<td>6.982</td>
<td>.008</td>
<td>13.000</td>
</tr>
<tr>
<td>Wait time 3 (5-10 mins)</td>
<td>1.135</td>
<td>.906</td>
<td>1.568</td>
<td>.210</td>
<td>3.111</td>
</tr>
<tr>
<td>Constant</td>
<td>.405</td>
<td>.645</td>
<td>.395</td>
<td>.530</td>
<td>1.500</td>
</tr>
</tbody>
</table>

At a significance level of 0.05, the following results were obtained after fitting the models:
• Both student wait time and the ranking of tutor knowledge in a subject area where found to have a statistically significant relationship with the overall student satisfaction rating of the MAC’s services.
• Both the frequency of student visits to the MAC and whether or not a student received the help they needed after a session did not show any statistically significant relationship with the overall satisfaction rating of the MAC’s services. (These results are not shown).

From Table 1: \( \log \frac{\text{satisfactory}}{\text{unsatisfactory}} = 0.405 + 3.356 \text{Wait time 1} + 2.565 \text{Wait time 2} + 1.135 \text{Wait time 3} \)

Findings: Students with wait times of less than 3 minutes were 29 times more likely to provide a satisfactory rating of the MAC’s services than students who had to wait 5-10 minutes for assistance.

Table 2: Variables in the equation for the model with tutor knowledge as a predictor.
<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>S.E.</th>
<th>Wald</th>
<th>Sig</th>
<th>Exp B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tutor Knowledge</td>
<td>4.942</td>
<td>1.262</td>
<td>15.331</td>
<td>.000</td>
<td>140.000</td>
</tr>
<tr>
<td>Tutor Knowledge 1 (SA)</td>
<td>2.107</td>
<td>.881</td>
<td>5.713</td>
<td>.017</td>
<td>8.222</td>
</tr>
<tr>
<td>Constant</td>
<td>-.288</td>
<td>.764</td>
<td>.142</td>
<td>.706</td>
<td>.750</td>
</tr>
</tbody>
</table>

From Table 2: \( \log \frac{\text{satisfactory}}{\text{unsatisfactory}} = -0.288 + 4.942 \text{Tutor knowledge 1} + 2.107 \text{Tutor knowledge 2} \)

Findings: Students who strongly agreed that the tutor they worked with was knowledgeable in their subject area were 140 times more likely to provide a satisfactory rating of the MAC’s services than students who had no opinion on how knowledgeable the tutor was.

CONCLUSIONS
The following conclusions can be drawn from the analysis:
• Additional efforts should be made into cutting down student wait time at the MAC since it has a significant impact on overall student satisfaction.
• There is sufficient evidence to suggest that tutors at the MAC should be assigned to support courses that they are most knowledgeable in so that they can better assist students.

REFERENCES

ACKNOWLEDGEMENTS
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