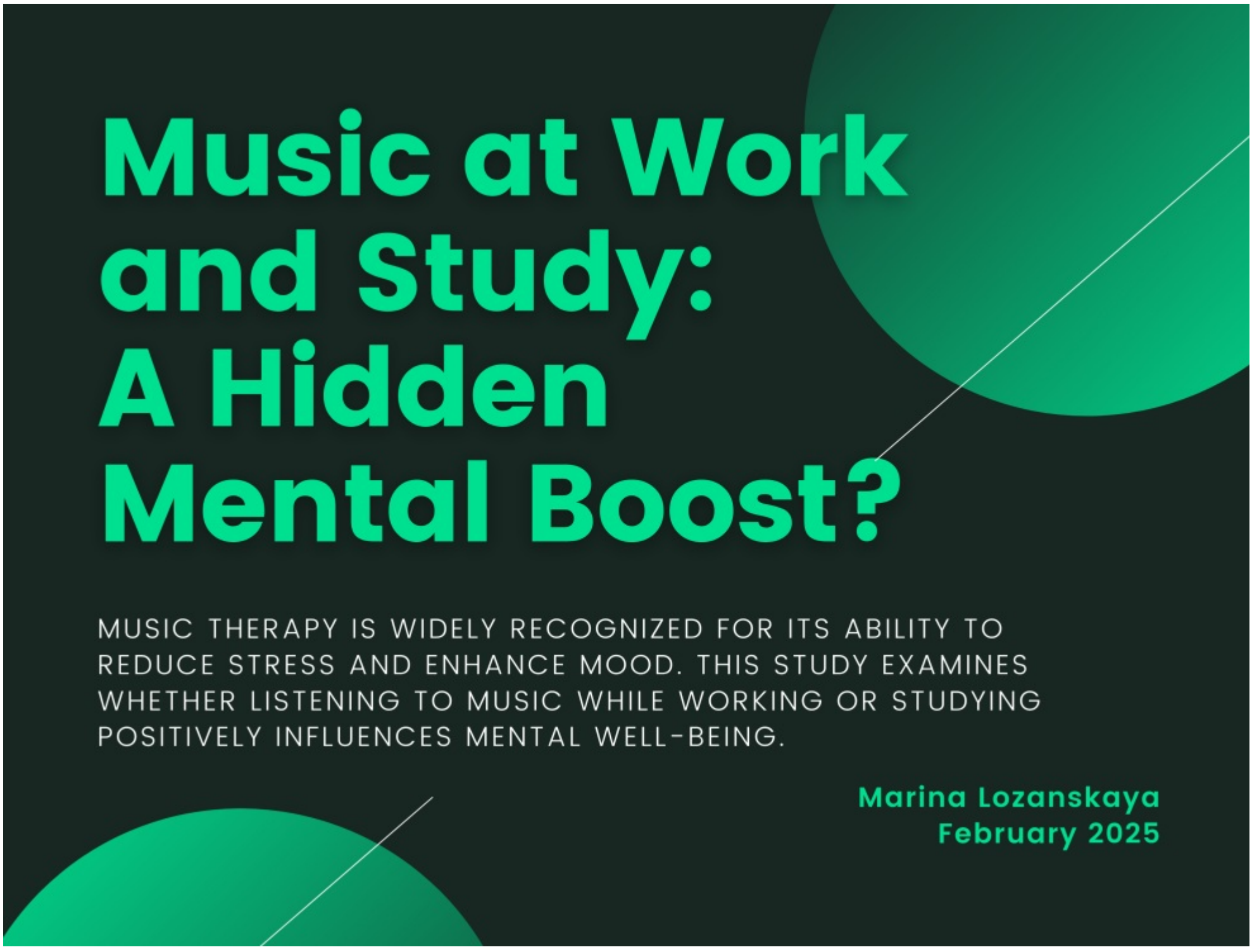
Music at Work and Study: A Hidden Mental Boost?



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Dataset Overview

736
Total Respondents

25,2
Average Age of Respondents, years

16
Music Genres Surveyed

Data Source: Music & Mental Health Survey Results on Kaggle

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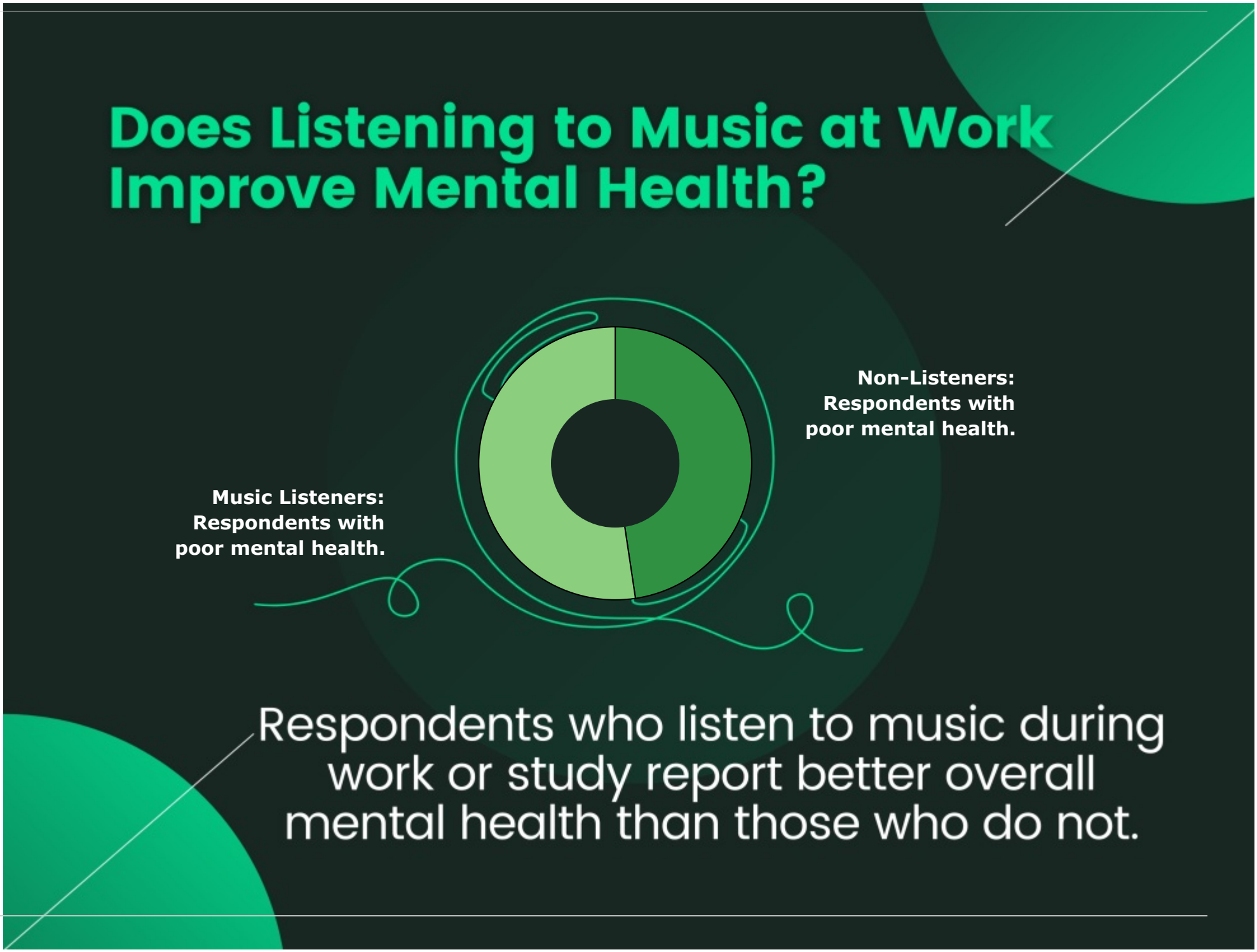

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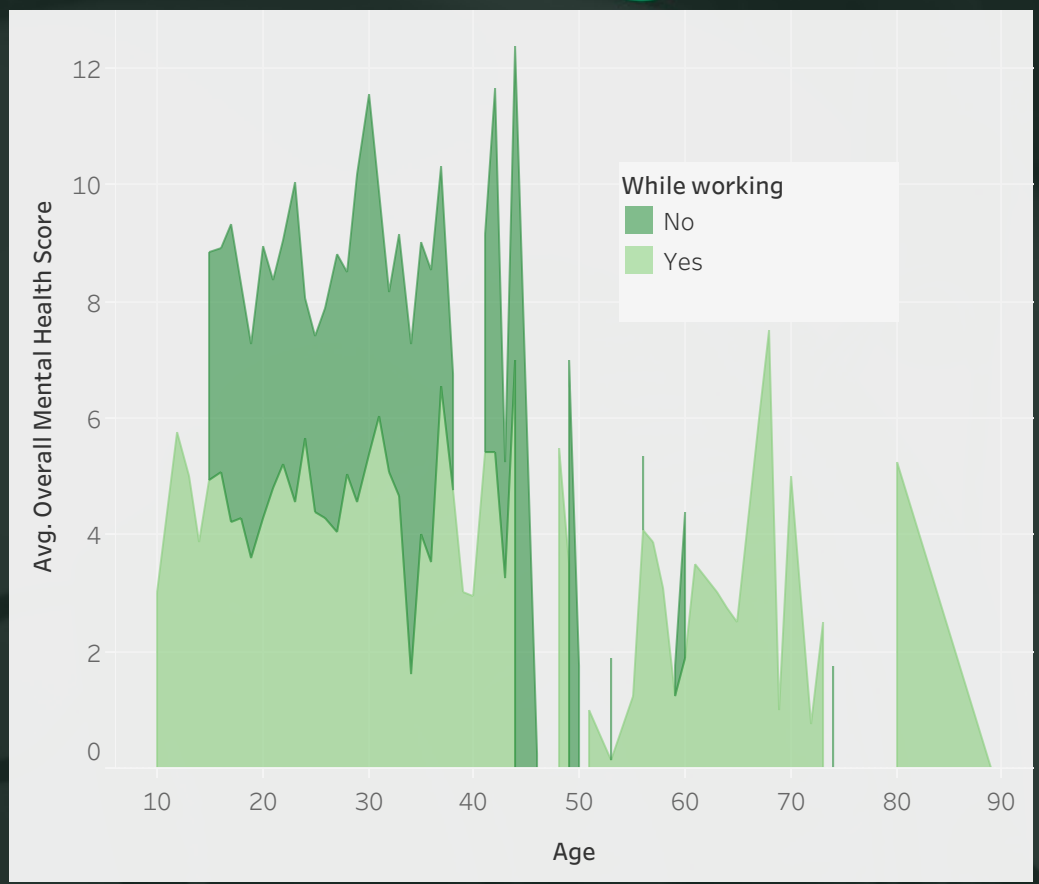
Music, Age, and Mental Well-being



- Younger individuals are more likely to listen to music while studying or working.
- Their mental health scores indicate lower levels of stress and sleep disorders.
- This trend supports the idea that music could improve focus and overall well-being.

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STATISTICAL TESTING

NULL HYPOTHESIS (H_0)

There is no significant difference in overall mental health scores between those who listen to music while working/studying and those who do not.

ALTERNATIVE HYPOTHESIS (H_1)

There is a significant difference, meaning that listening to music impacts mental health while studying or working.

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ARE THESE DIFFERENCES STATISTICALLY SIGNIFICANT?

To validate our findings, we ran a t-test to compare the overall mental health scores between those who listen to music while working/studying and those who do not. Next to is the code used for the analysis.

```
# Creating a new column for Overall Mental Health Score
df_check['Overall Mental Health Score'] = df_check[['Anxiety',
'Depression', 'Insomnia', 'OCD']].mean(axis=1)

# Cleaning and filtering data for analysis
df_test = df_check[['Age', 'Overall Mental Health Score', 'While
working']].dropna()

# Splitting the data into two groups: Those who listen to music
while working and those who don't
group_yes = df_test[df_test['While working'] == 'Yes']['Overall
Mental Health Score']
group_no = df_test[df_test['While working'] == 'No']['Overall
Mental Health Score']

# Performing an independent T-test to compare means
t_stat, p_value = ttest_ind(group_yes, group_no, equal_var=False)
 # Welch's T-test to account for unequal variances

# Display results
t_stat, p_value
```

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Statistical Test Summary

T-TEST VALUE	P-VALUE
1.99	0.048

- The p-value is less than 0.05, meaning the difference in mental health scores is statistically significant.
- Since $p < 0.05$, we reject the null hypothesis, meaning there is a real difference between the two groups.
- Individuals who **listen to music while working/studying report better overall mental health scores** (lower values indicate better well-being).

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Thank You

RESEARCH CITATIONS AVAILABLE:

DATA SOURCE:
MUSIC & MENTAL HEALTH SURVEY RESULTS ON KAGGLE

GITHUB:
GITHUB.COM/MARINA-LOZ/MUSIC-AND-MENTAL-HEALTH/TREE/MAIN

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