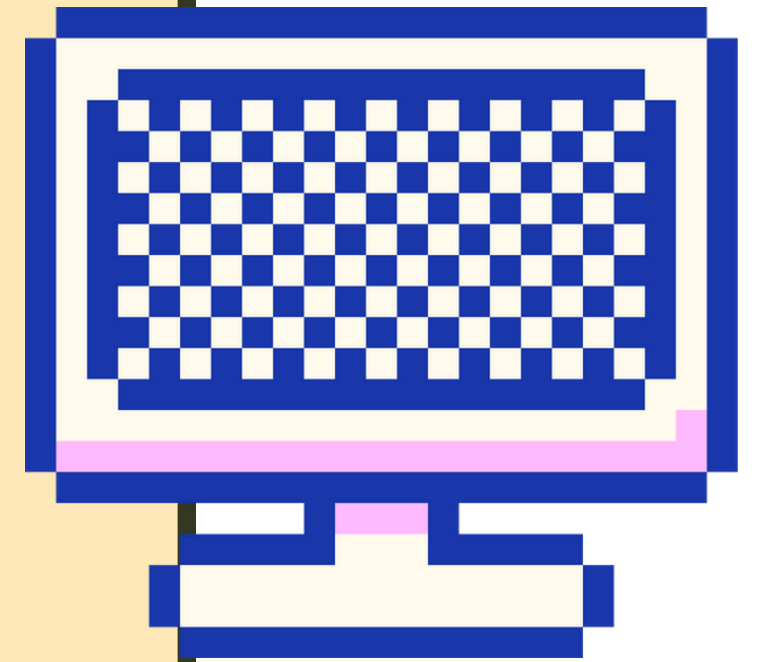


# **From Pixels to Problems:**

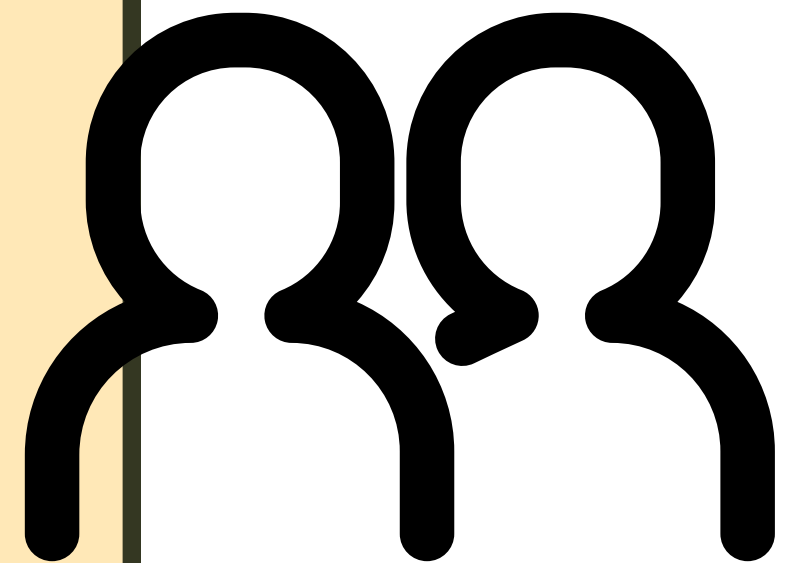
**Analyzing How Screen Time Affects  
Productivity and Attention Span**



# Group Members:

BSDSF22M011 Muhammad Ali Raza

BSDSF22M041 Mohammad Ammar



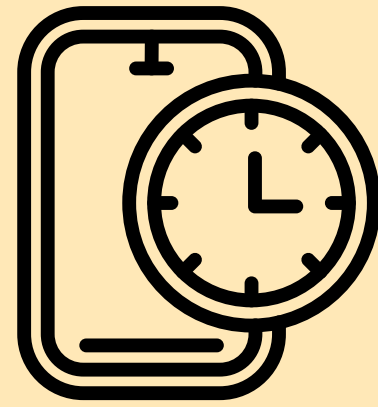
# Survey Overview



# Key Factors Gathered



Demographics



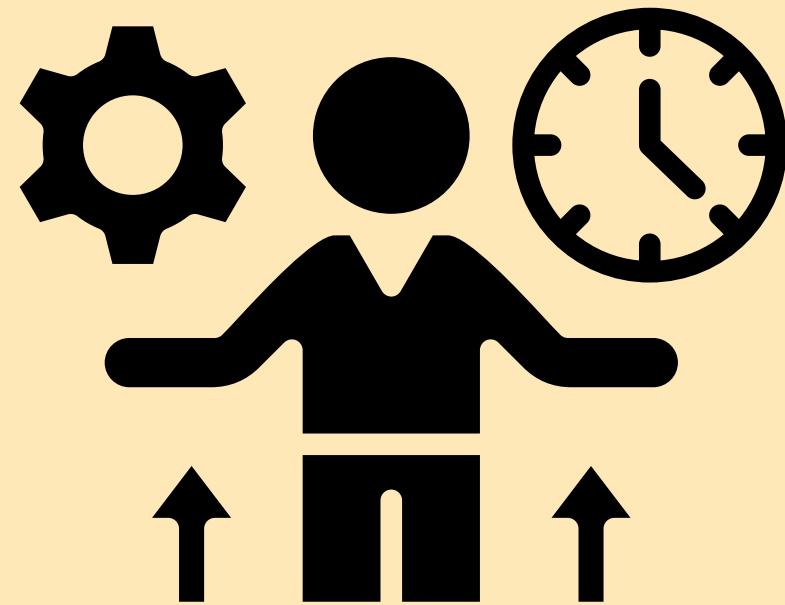
Screen Time



Work Strategy



Screen Activity



Productivity Level



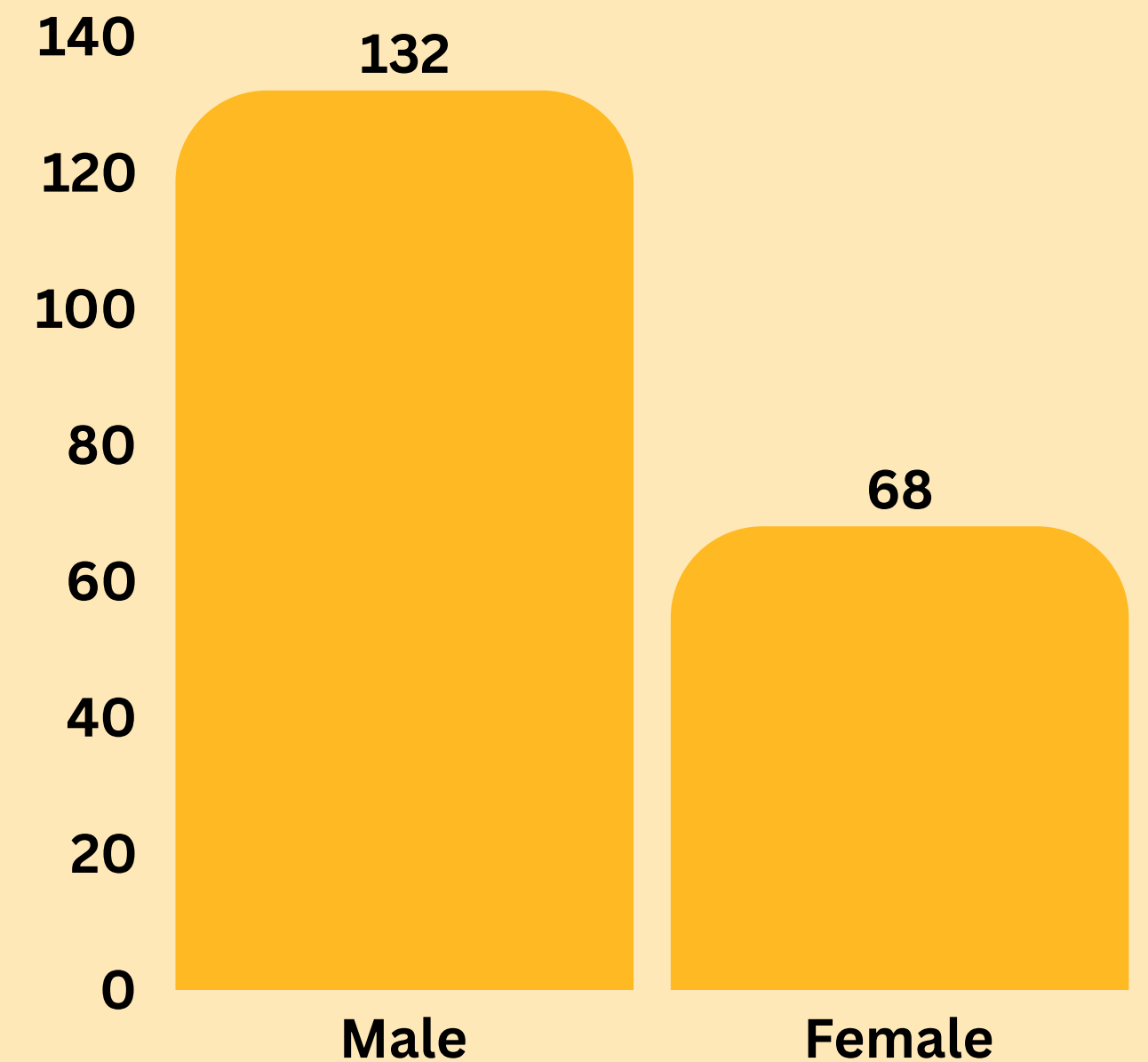
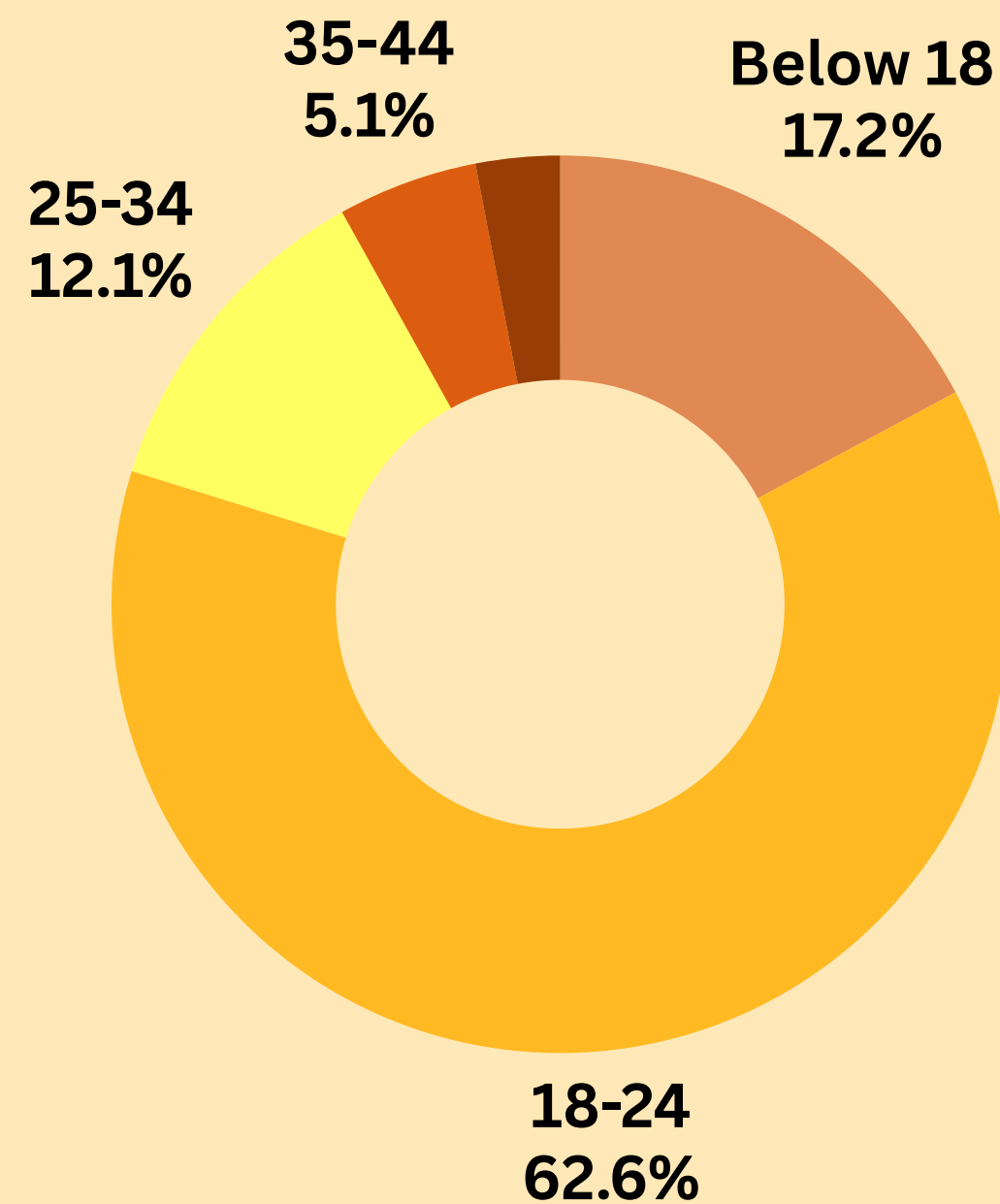
Attention Span

**Total Responses**

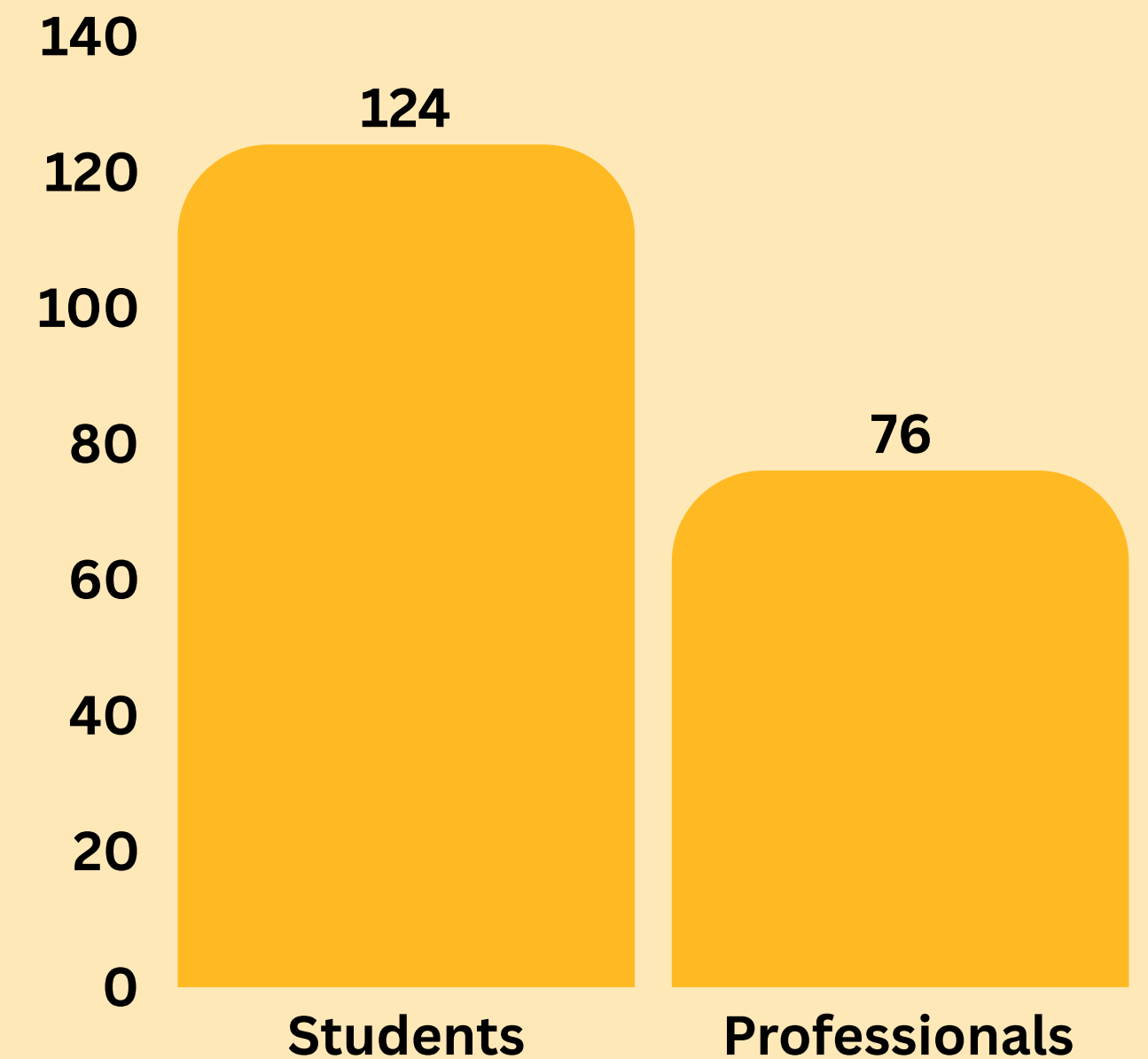
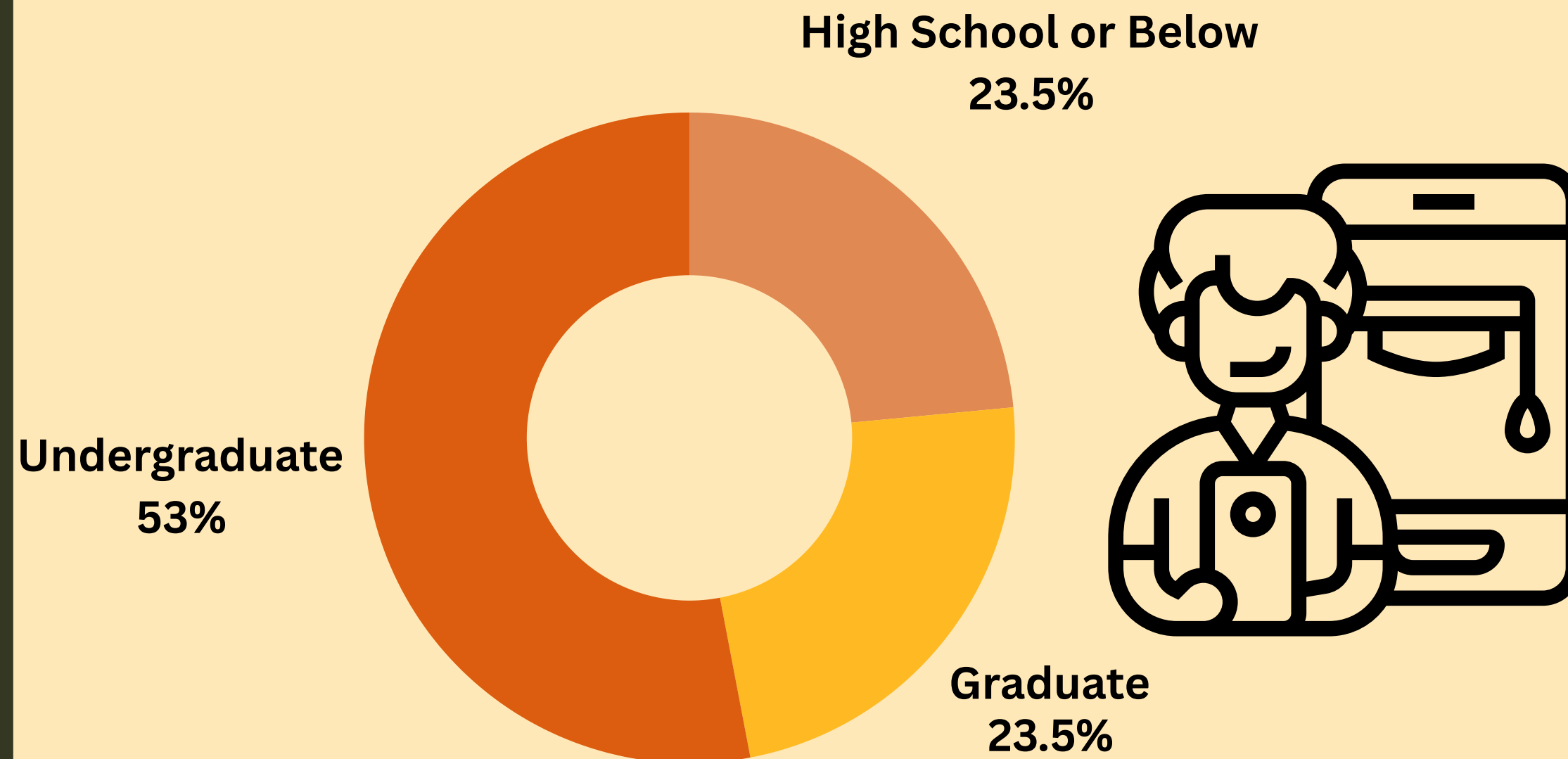
**200**



# Age Groups & Gender



# Education and Occupation

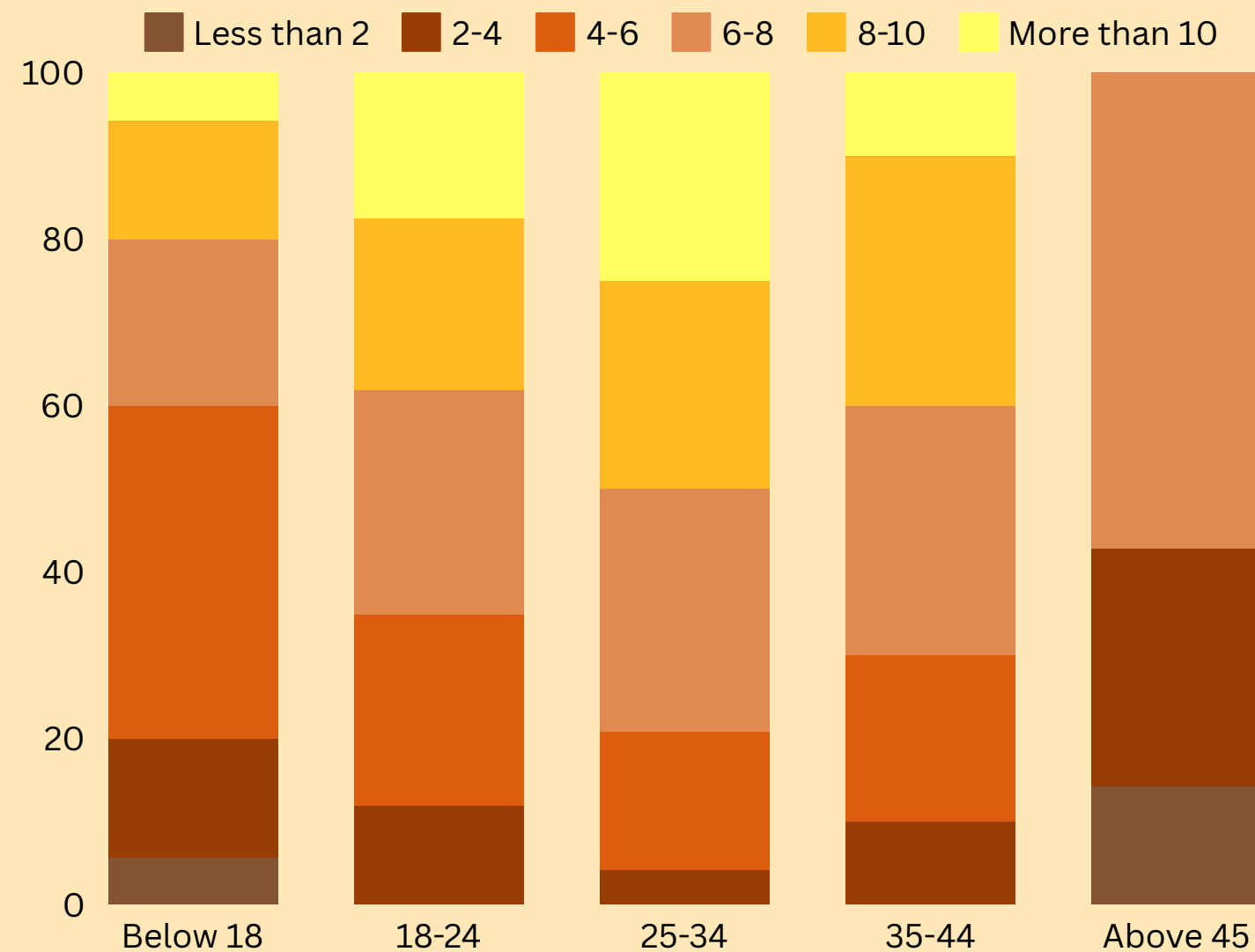
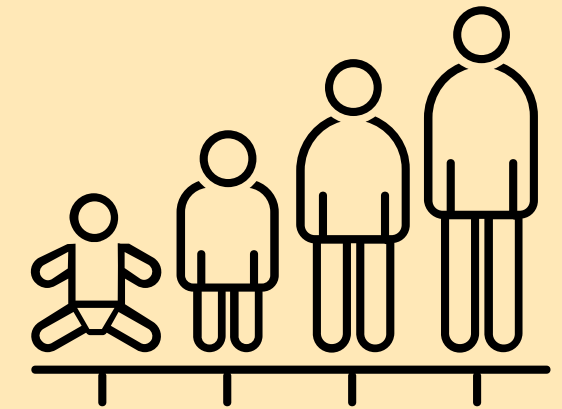


# Statistical Analysis





# Age & Screen Usage



**H<sub>0</sub>:**

The age of a user and the amount of time he/she spends in front of screens are dependent.

**H<sub>1</sub>**

The age of a user and the amount of time he/she spends in front of screens are independent.

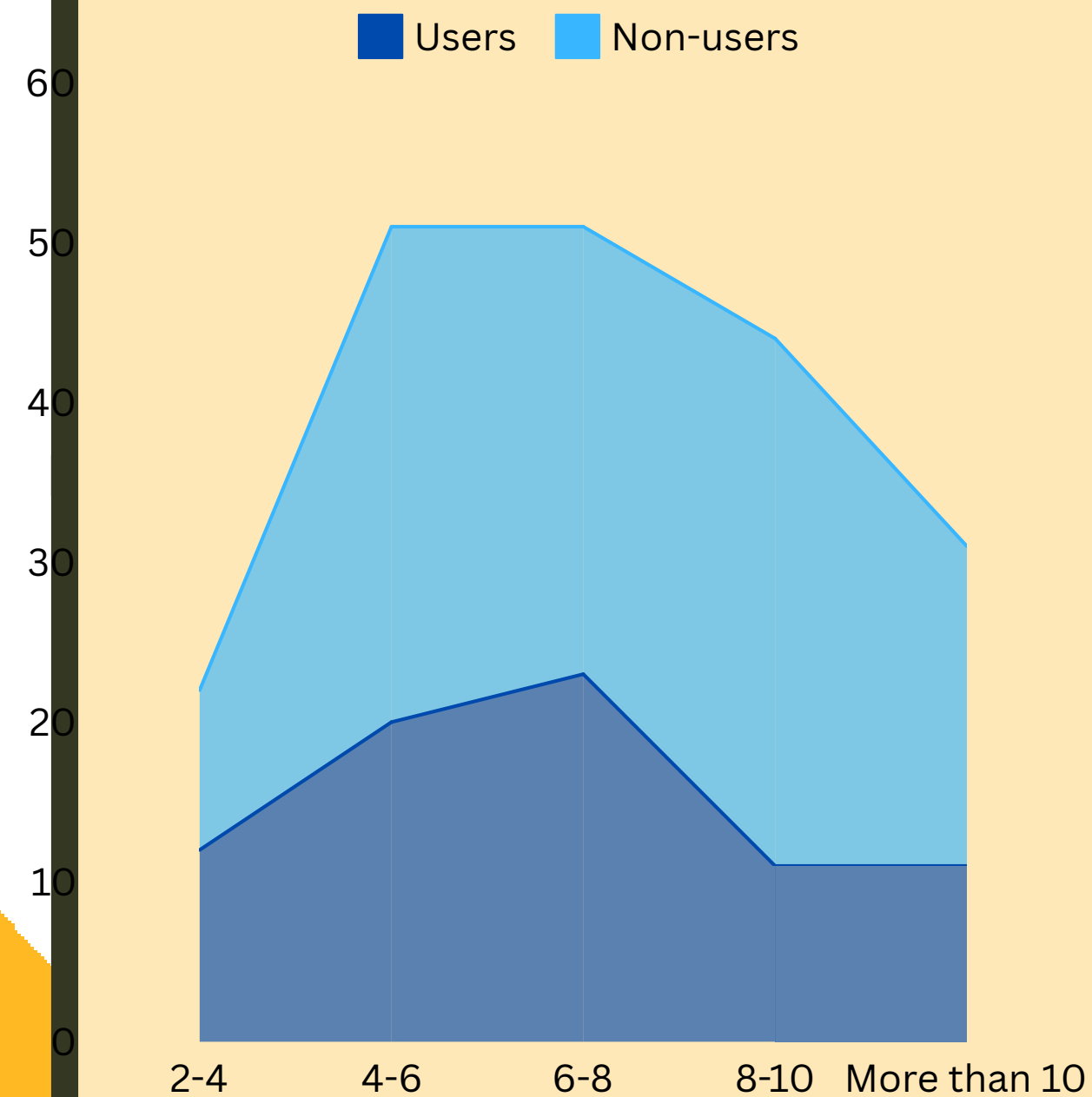
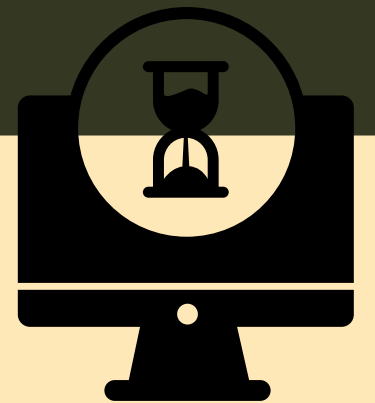
Test Used: Chi-Square Test for Independence  
P-Value: 0.09

**P-Value > 0.05**

**Fail to Reject H<sub>0</sub>**

**Age and Screen Usage are independent**

# Tools & Screen Time



**H<sub>0</sub> :**

The median screen time for users and non-users of screen time tools is same.

**H<sub>1</sub>**

The median screen time for users and non-users of screen time tools is different.

Test Used: Kruskal-Wallis Test

P-Value: 0.023

**P-Value < 0.05**

**Reject H<sub>0</sub>**

The median is different.

# Occupation & Productivity



Students



Professionals



■ Highly Productive

■ Un/Moderately Productive

$H_0$

The proportions of students and professionals with high productivity is the same.

$H_1$ :

The proportions of students and professionals with high productivity is different.

Test Used: Proportion Testing

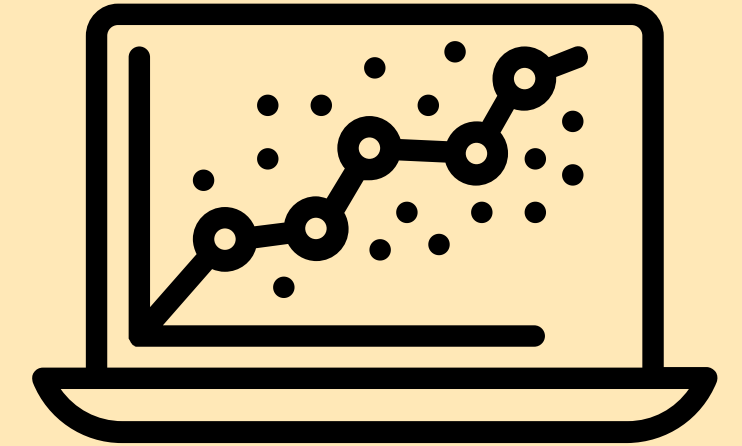
P-Value: 0.0009

$P\text{-Value} < 0.05$

**Reject  $H_0$**

The proportions are different.

# Co-relations



Screen Time (in hrs) V Productivity

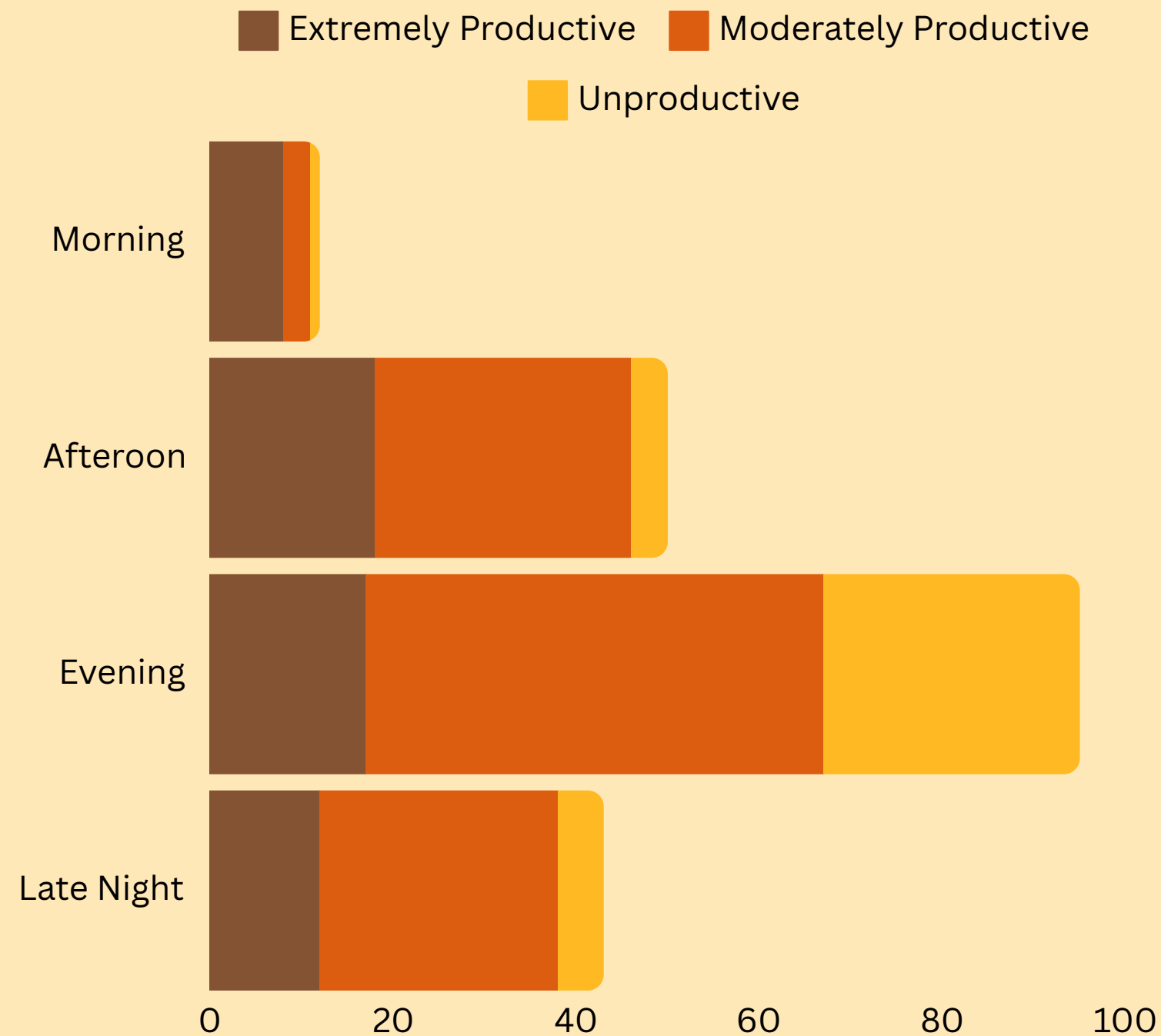
$$rs = - 0.023$$

Screen Time (in hrs) V Attention Span

$$rs = 0.084$$

No apparent relation

# Time of Day & Productivity



$H_0$  :

Productivity is independent of the time of day.

$H_1$ :

Productivity is dependent on the time of day.

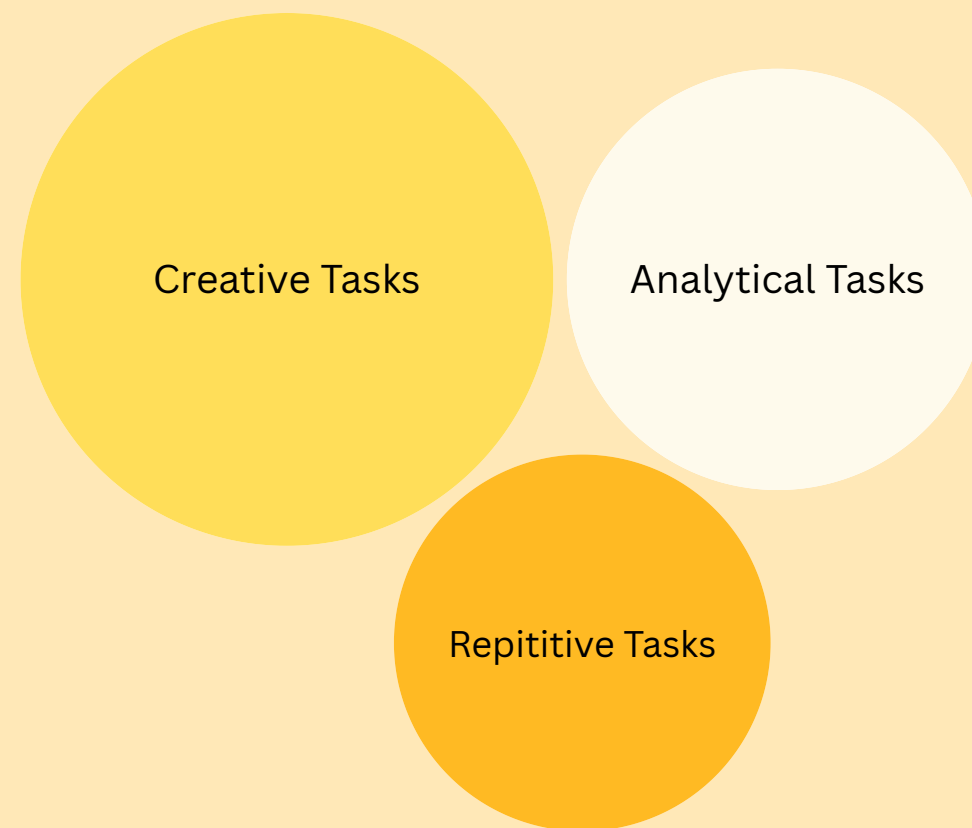
Test Used: Chi-Square Test for Independence  
P-Value: 0.0005

$P\text{-Value} < 0.05$

**Reject  $H_0$**

Productivity varies with time of day

# Type of Task



Extremely Productive

$H_0$  :

Productivity is independent of task type.

$H_1$ :

Productivity is dependent on task type.

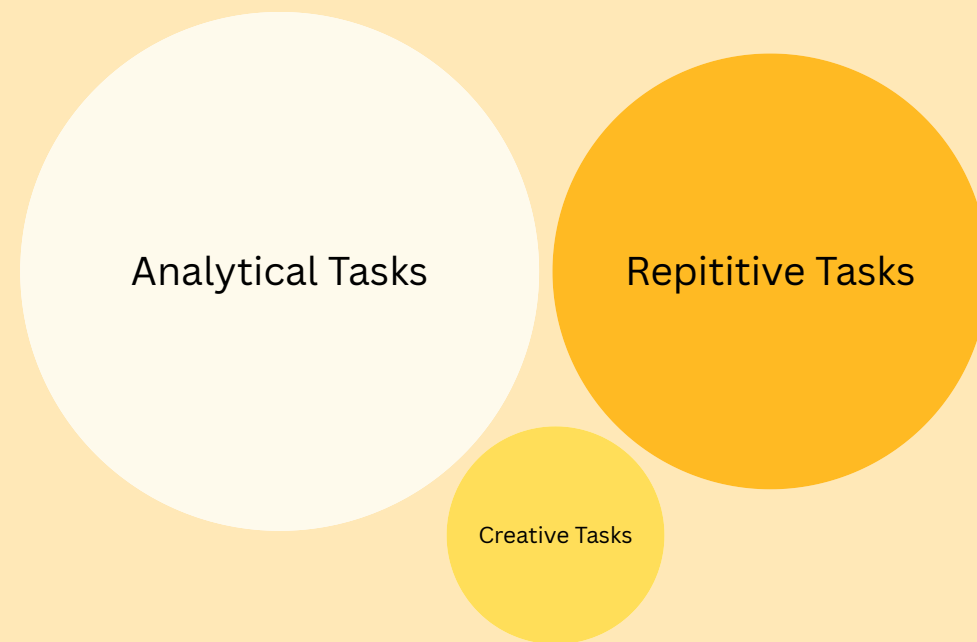
Test Used: Chi-Square Test for Independence  
P-Value: 0.048

$P\text{-Value} < 0.05$

**Reject  $H_0$**

Productivity varies with task type

# Type of Task



Unproductive

$H_0$  :

Productivity is independent of task type.

$H_1$ :

Productivity is dependent on task type.

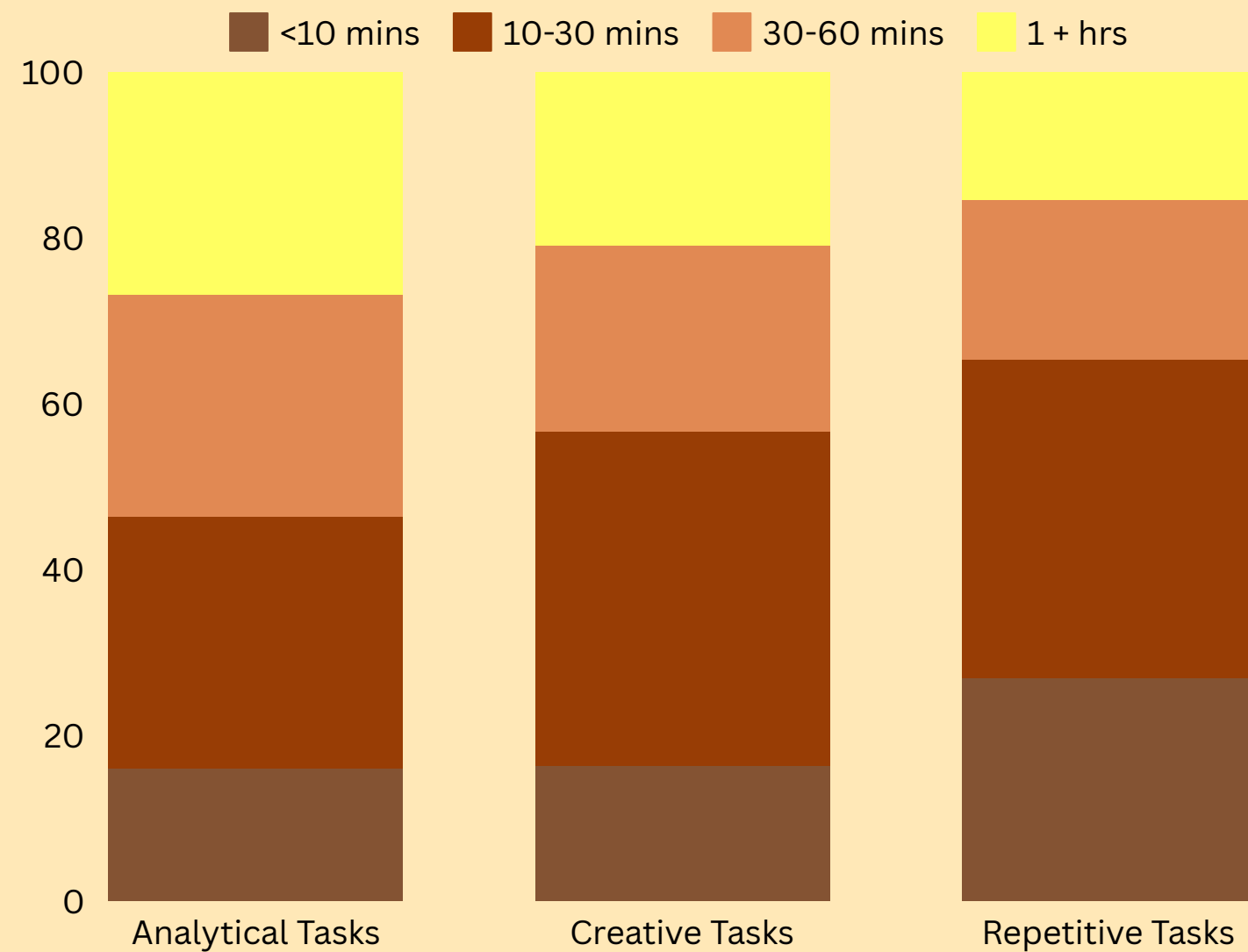
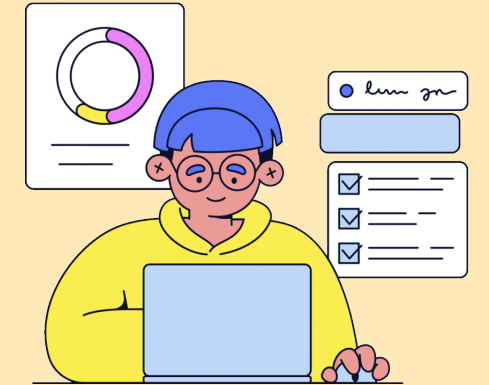
Test Used: Chi-Square Test for Independence  
P-Value: 0.048

$P\text{-Value} < 0.05$

**Reject  $H_0$**

Productivity varies with task type

# Type of Task



$H_0$  :

Attention Span is independent of task type.

$H_1$ :

Attention Span is dependent on task type.

Test Used: Chi-Square Test for Independence  
P-Value: 0.341

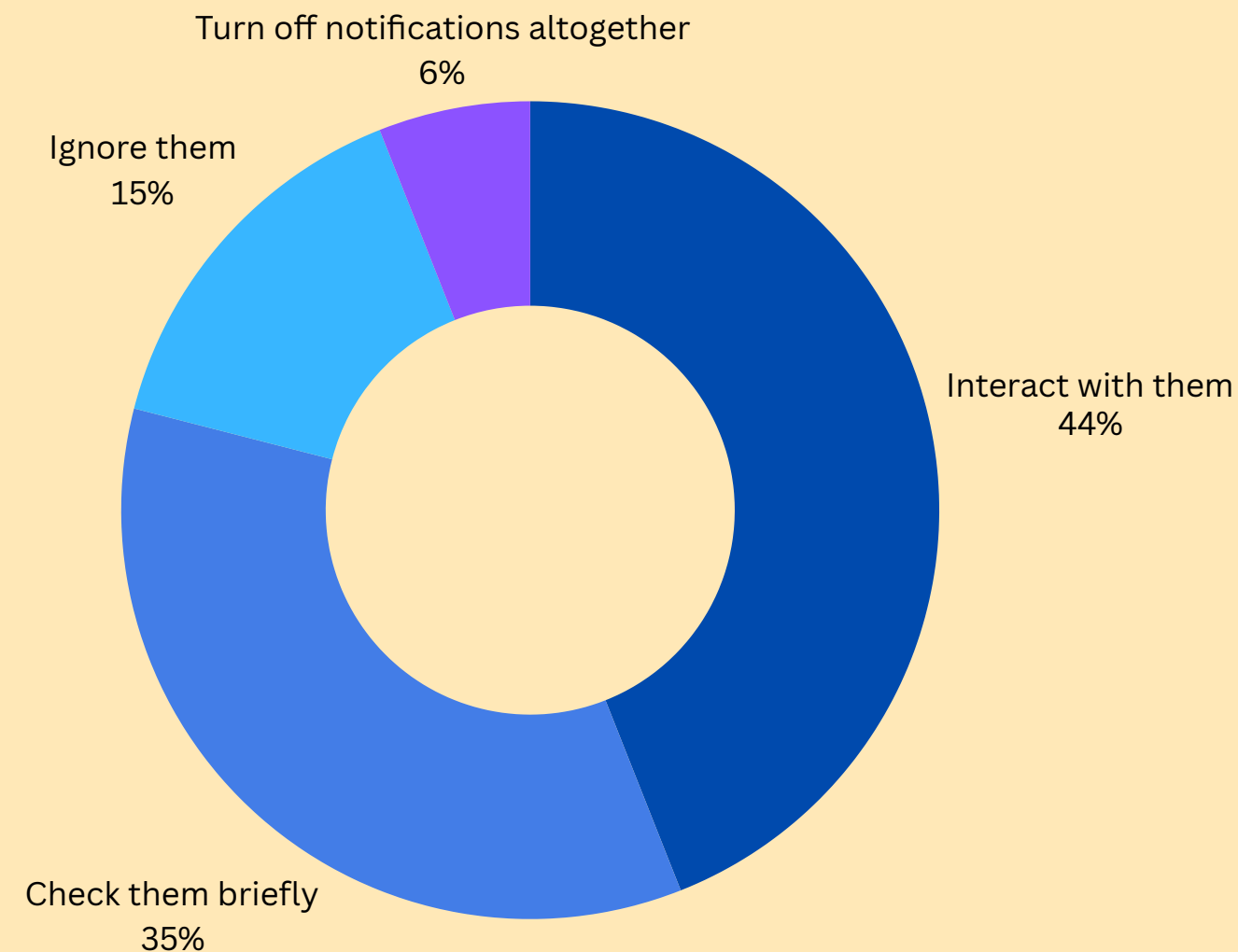
$P\text{-Value} > 0.05$

**Fail to reject  $H_0$**

Attention Span does not depend on task type



# Notification Handling



Individuals with attention span of less than 10 minutes

$H_0$  :

Attention Span is independent of notification handling strategy

$H_1$ :

Attention Span is dependent on notification handling strategy

Test Used: Chi-Square Test for Independence  
P-Value: 0.0041

**P-Value < 0.05**

**Reject  $H_0$**

Attention Span depends on notification handling strategy

# Conclusion





**Thank You!**