



Image-based Social Media Use and Mental Health in Young Adults

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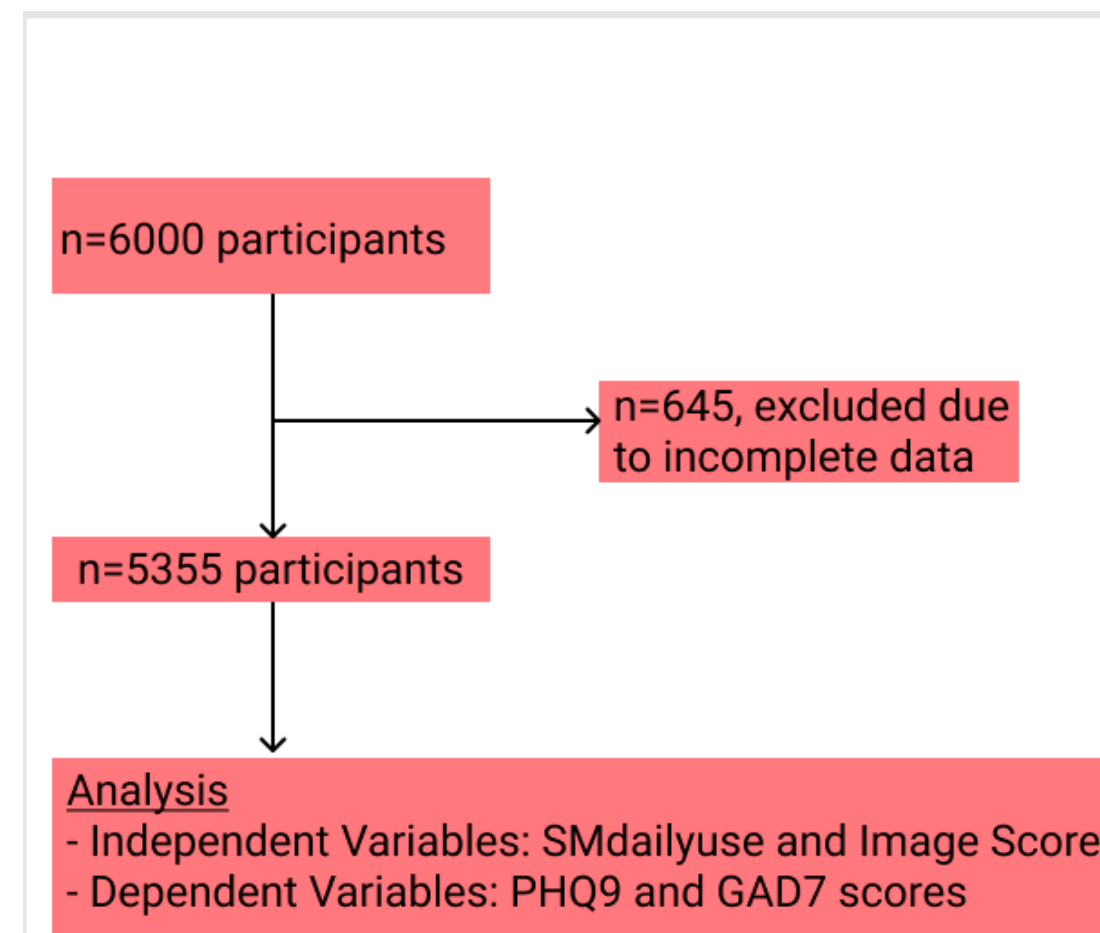
INTRODUCTION

- Prevalence of depression and anxiety is highest amongst young adults possibly due to increased reliance on relationships for self esteem and identity.
- Social media has become ubiquitous over the last ten years, with increasing numbers of young adults spending more of their day on these platforms.
- Increased social media use in general has been found to be correlated with worse depression and anxiety. However, each platform emphasizes different types of content.
- Image-based platforms have been associated with increased body image concerns in young women.

Objective: To determine the relationship between image-based social media platform use and mental health (depression and anxiety) among adolescents in the U.S.

METHODS

Participants: A nationally-representative group of 6000 U.S young adults, ages 18 – 25 years, was recruited using Qualtrics for an online cross-sectional survey that collected social media use information, PHQ-9 depression scores, GAD-7 anxiety scores, and demographics.



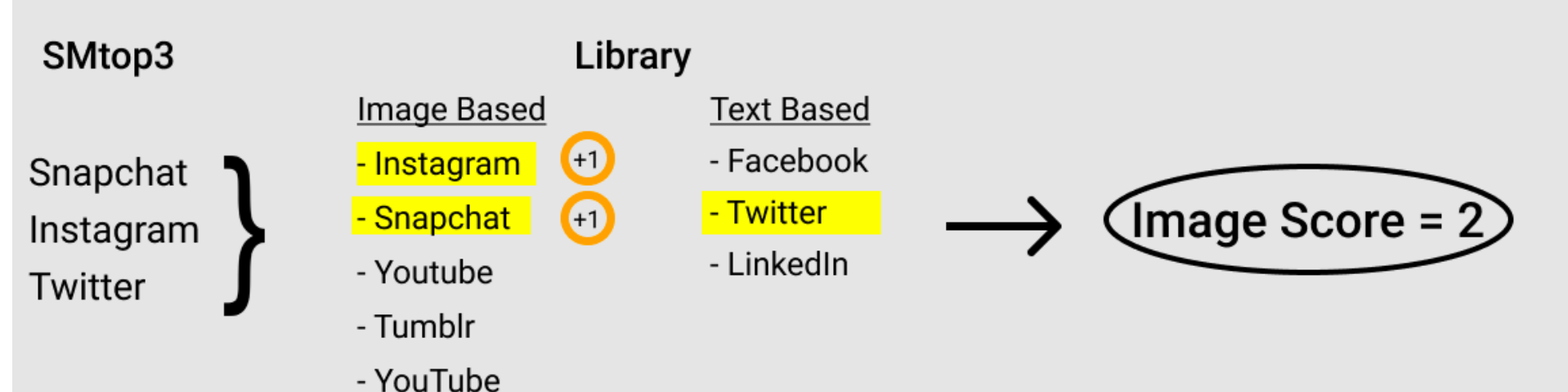
Variables

SMdailyuse: Self-reported time on social media per day.

SMtop3: Self-reported most frequently used social media platforms. Respondents could place up to three platforms in their SMtop3.

Image Score: Derived from SMtop3. It quantifies the number of “image-based” platforms that a respondent placed in their SMtop3. Image-based platforms were categorized based off of content format, the type of content highlighted on the platform’s “Explore” page, and platform layout.

Image Score



Analysis: Linear regression was used to explore the association between SMdailyuse and Image Score with average PHQ9 and GAD7 scores. Corrected p values of 0.05 were used as the cutoff for significance.

RESULTS

Increased SMdailyuse and Image Score are independently associated with worse depression and anxiety.

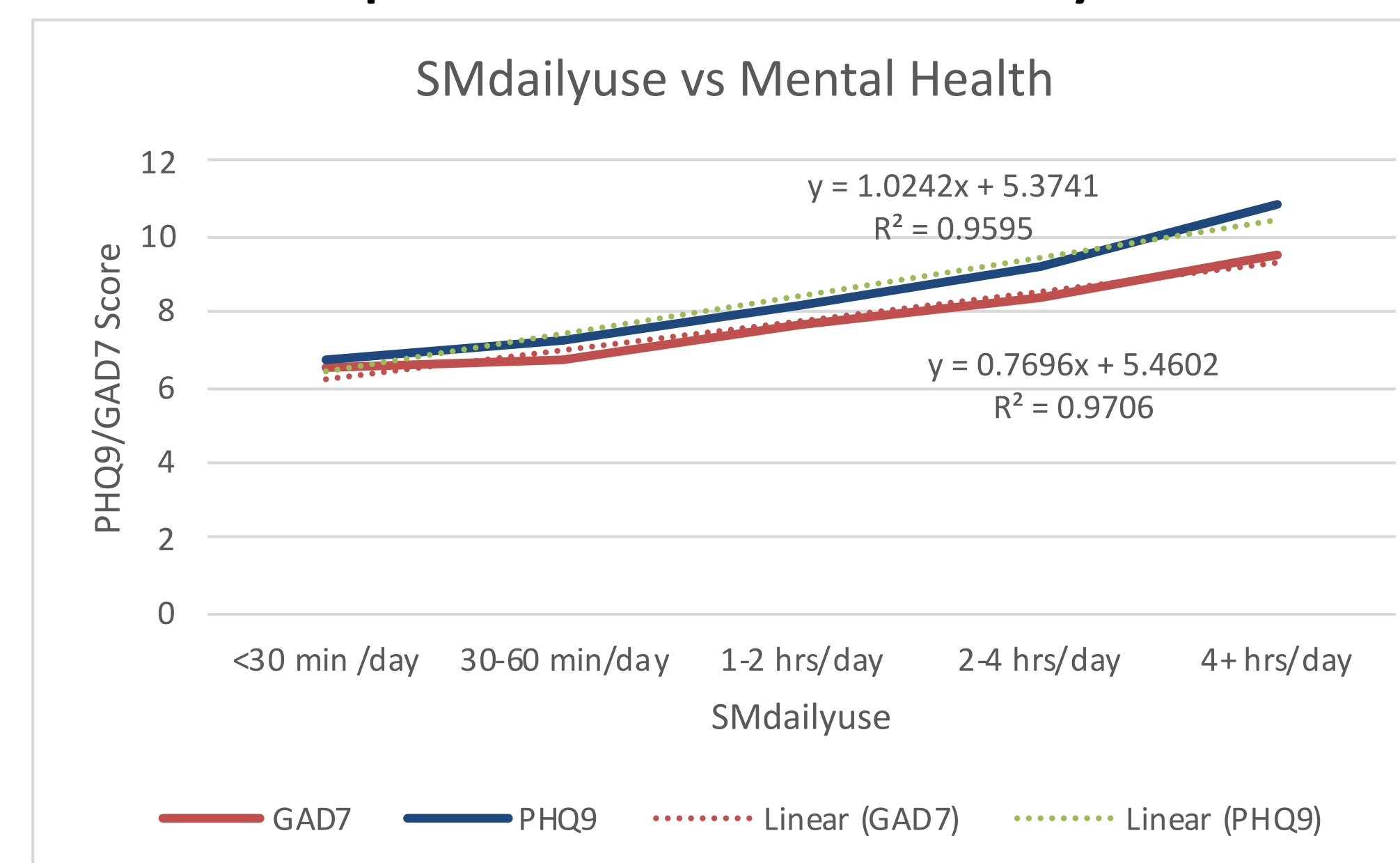


Figure 1: Single variable linear regression demonstrates positive correlation with SMdailyuse, PHQ9 (coeff = 1.0242, R² = 0.9595, p=0.05), and GAD7 scores (coeff = 0.7696, R² = 0.9706). Both trends demonstrate linear relationships.

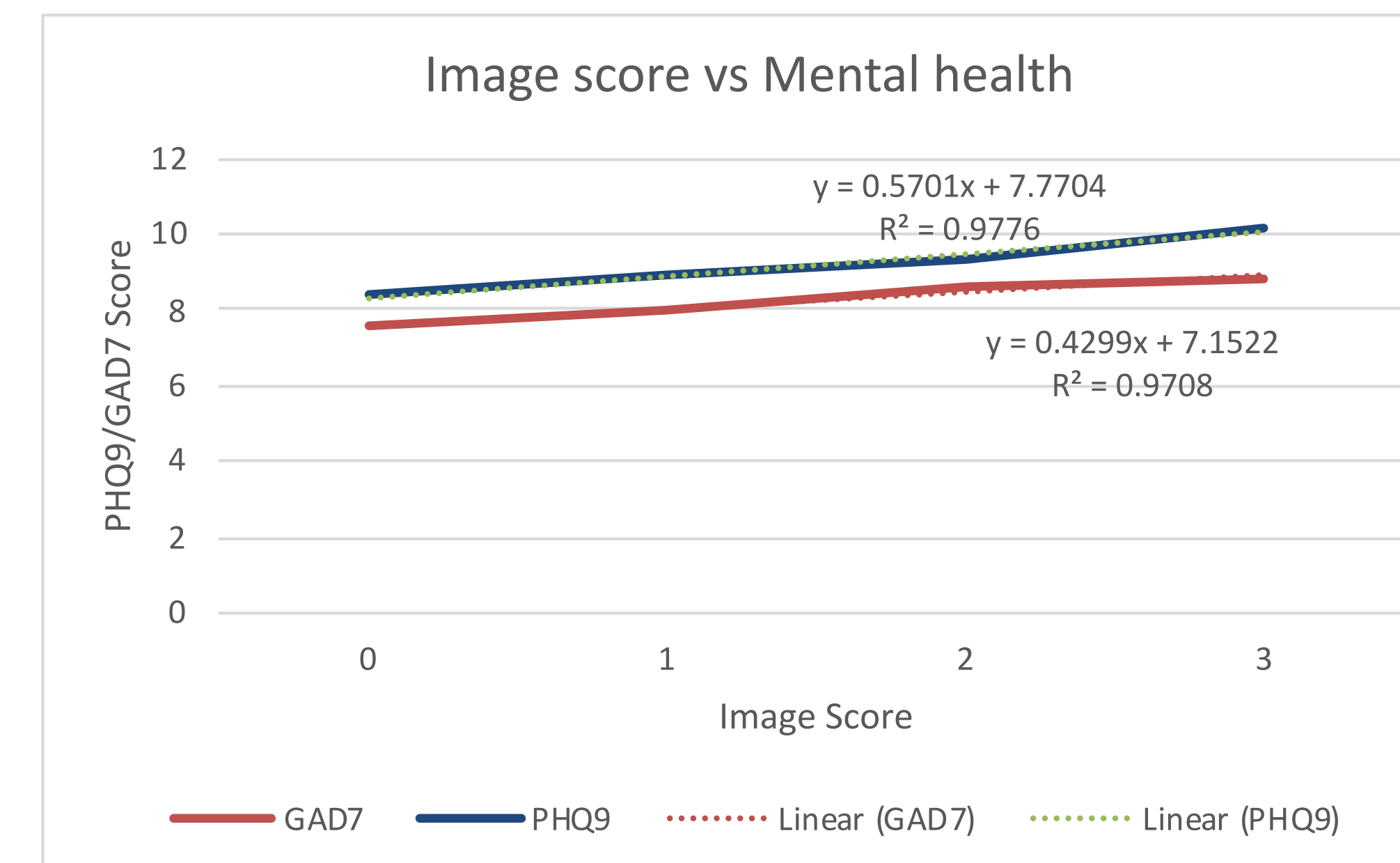


Figure 2: Single variable linear regression demonstrates positive correlation with Image Score, GAD7 (coeff = 0.4299, R² = 0.9708, p=0.05), and PHQ9 scores (coeff = 0.5701, R² = 0.9776). Both trends demonstrate linear relationships.

PHQ9 (R ² = 0.811)			
	coefficient	p value	
Image Score	0.516	0.004	
SMdailyuse	0.968	0.001	

Table 1: Multivariate linear regression of Image Score, SMdailyuse, and PHQ9 score demonstrates positive linear relationship of both independent variables (Image Score and SMdailyuse) with dependent variable (PHQ9).

GAD7 (R ² = 0.713)			
	coefficient	p value	
Image Score	0.439	0.008	
SMdailyuse	0.665	0.001	

Table 2: Multivariate linear regression of Image Score, SMdailyuse, and GAD7 score demonstrates positive linear relationship of both independent variables (Image Score and SMdailyuse) with dependent variable (GAD7).

Image Score had a negative effect on mental health for low usage respondents but little effect on high usage respondents.

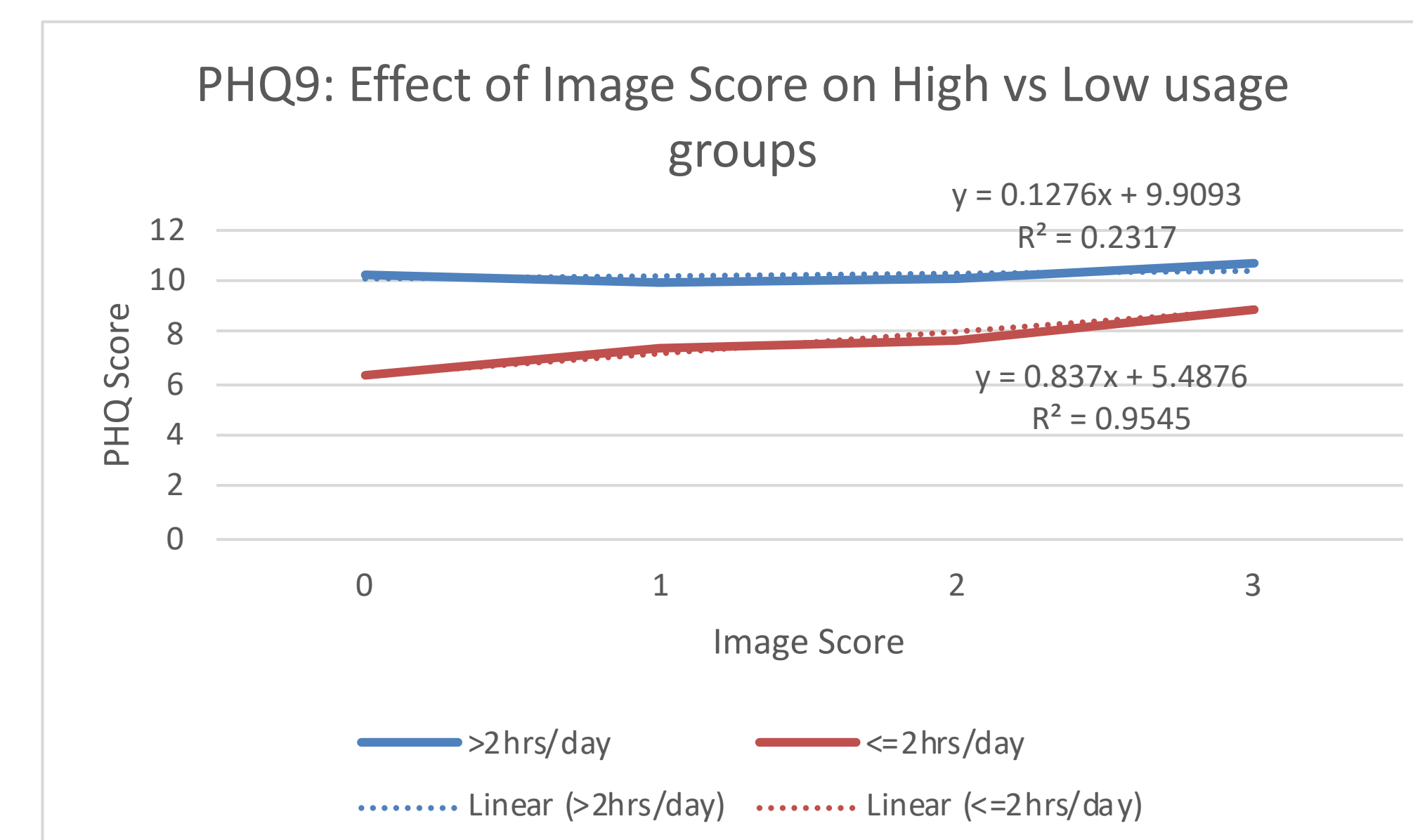


Figure 3: Positive correlation between Image score and PHQ9 score among low usage respondents (coeff = 0.837, R² = 0.9545), but no correlation among high usage respondents (coeff = 0.1276, R² = 0.2317).

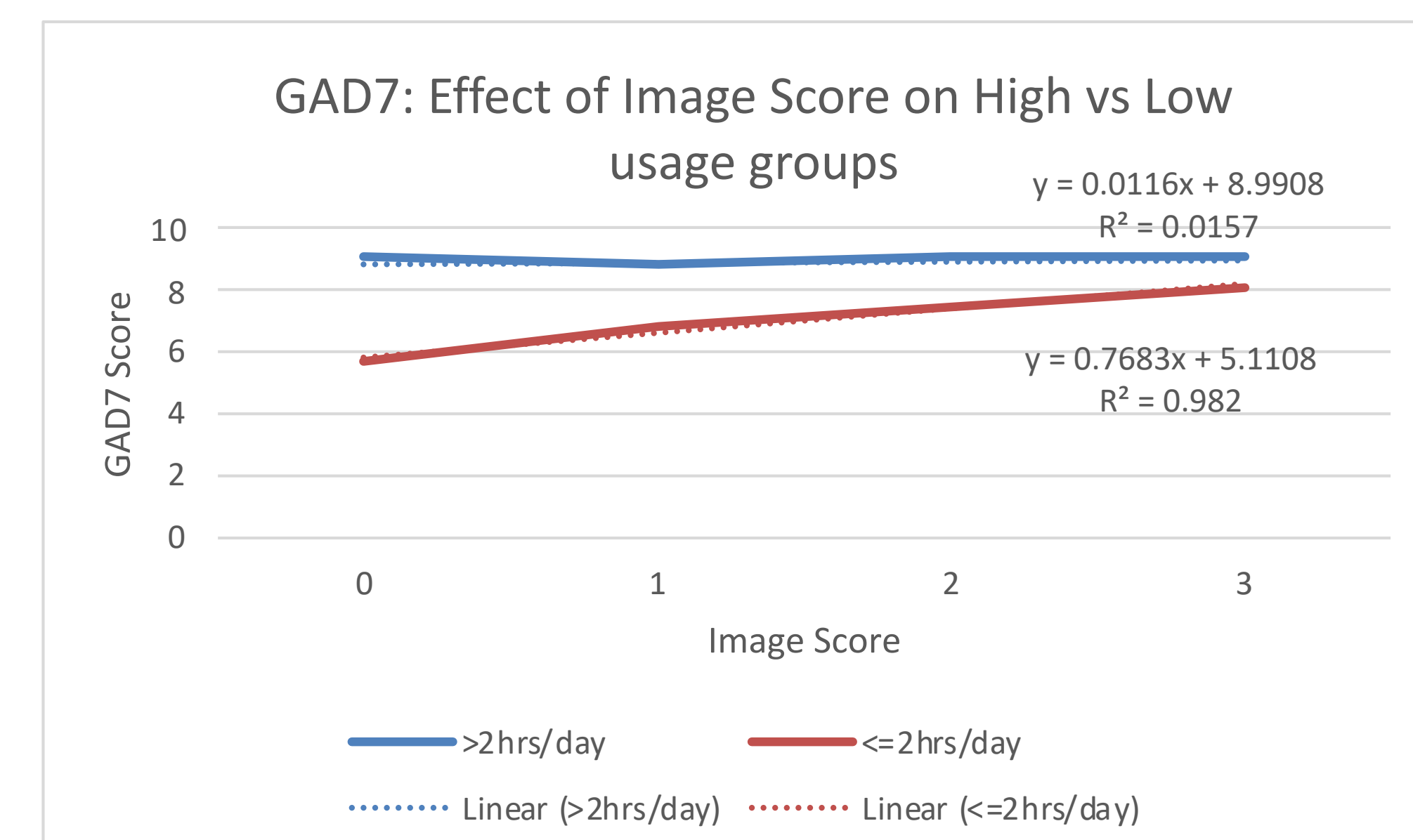


Figure 4: Positive correlation between Image score and GAD7 score among low usage respondents (coeff = 0.7683, R² = 0.982), but no correlation among high usage respondents (coeff = 0.0116 R² = 0.0157).

CONCLUSIONS

- More than a third of respondents spend more than 4 hours a day on social media. Depression and anxiety correlated together with increased image-based social media use and daily social media use.
- Increased social media usage correlated with worse depression and anxiety regardless of media form.
- Image-based social media had a negative effect on mental health for low usage respondents but little effect on high usage respondents.
- Understanding the mechanisms and the direction of these associations may guide interventions in this age group.
- Temporal factor of social media content may be an interesting avenue of exploration. Comparing content that disappears versus permanent content may have different implications for mental health.

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