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**Research Track:** Life Sciences and Medical Sciences

## Research Question Draft

### 1) Draft Research Question (must be a question)

**My draft research question:** How does excessive screen time and social media use affect sleep quality, memory performance, and emotional regulation in teenagers?

### 2) Quick checklist

- Specific (not too broad)
- Researchable (I can realistically find evidence/data)
- Original (not just repeating a common question)
- Written as a question (not a topic/statement)
- Fits my chosen research track
- Draft only (I will refine in Week 3)

## Annotated Source List (3 to 5 Sources)

### Reminder checklist

- Each source is peer-reviewed OR from a credible institutional publisher
- Each annotation includes: **citation, 3-sentence summary, relevance**
- At least **2 sources** come from **academic databases** (ex: Google Scholar, JSTOR, PubMed, IEEE Xplore, ACM DL, ERIC, PsycINFO)

### SOURCE 1

**Citation:** Twenge, J. M., & Campbell, W. K. (2018). Associations between screen time and lower psychological well-being among children and adolescents. *Preventive Medicine Reports*, 12, 271–283.

**Where you found it (database/publisher):** google scholar

#### 3-sentence summary:

1. The study examined large-scale survey data linking screen time with adolescent mental health outcomes.
2. Higher screen use was associated with increased anxiety, depression, and reduced emotional stability.

3. Teenagers spending more time on digital devices reported lower psychological well-being overall.

**Relevance to my research question (2-4 sentences):** This source directly supports the emotional regulation aspect of my research question. It provides statistical evidence connecting excessive screen use with mental health outcomes in teenagers. It helps establish a scientific foundation for investigating emotional effects.

**Notes / useful quote / key statistic (optional):** Higher screen exposure correlated with significantly lower well-being scores among adolescents.

## SOURCE 2

**Citation:** Uncapher, M. R., Thieu, M. K., & Wagner, A. D. (2016). Media multitasking and memory performance. *Psychonomic Bulletin & Review*, 23(2), 483–490.

**Where you found it (database/publisher):** Psychological science journal

### **3-sentence summary:**

1. The study investigated how frequent digital multitasking affects attention and memory.
2. Heavy media multitaskers showed weaker working memory performance.
3. Increased distraction reduced the brain's ability to store and recall information efficiently.

**Relevance to my research question (2-4 sentences):** This source directly supports the memory-performance part of my research. It provides neurological explanations for how constant digital stimulation impacts cognition. It strengthens the scientific argument about learning and concentration problems linked to screen time.

**Notes / useful quote / key statistic (optional):** High multitaskers performed worse on memory filtering tasks.

## SOURCE 3

**Citation:** Hale, L., & Guan, S. (2015). Screen time and sleep among school-aged children and adolescents: A systematic review. *Sleep Medicine Reviews*, 21, 50–58.

**Where you found it (database/publisher):** PubMed

### **3-sentence summary:**

1. This systematic review analysed multiple studies on screen exposure and sleep outcomes.
2. Most studies showed consistent links between screen time and shorter sleep duration.
3. Evidence suggested behavioural and biological factors both contribute to sleep disruption.

**Relevance to my research question (2-4 sentences):** This source strengthens reliability by summarising many studies rather than one experiment. It confirms that sleep disruption due to screen use is widely supported scientifically. It helps justify why sleep is a key variable in my research.

**Notes / useful quote / key statistic (optional):** Over 90% of reviewed studies found negative sleep associations.

## **SOURCE 4**

**Citation:** Kuss, D. J., & Griffiths, M. D. (2017). Social networking sites and addiction: Ten lessons learned. *International Journal of Environmental Research and Public Health*, 14(3).

**Where you found it (database/publisher):** Google Scholar

### **3-sentence summary:**

1. The article explores behavioural addiction patterns related to social media use.
2. Excessive engagement activates reward systems similar to addictive behaviours.
3. Emotional dependence on social media can affect mood regulation and stress levels.

**Relevance to my research question (2-4 sentences):** This study helps explain emotional regulation changes caused by social media overuse. It provides psychological and neurological explanations behind compulsive screen behaviour. It supports analysing emotional outcomes beyond simple usage time.

**Notes / useful quote / key statistic (optional):** Social media engagement can trigger dopamine-based reward responses.

## **SOURCE 5**

**Citation:** Cain, N., & Gradisar, M. (2010). Electronic media use and sleep in school-aged children and adolescents. *Sleep Medicine*, 11(8), 735–742.

**Where you found it (database/publisher):** PubMed

### **3-sentence summary:**

1. This review analysed how electronic media impacts sleep patterns in young people.
2. Screen exposure before bedtime delays sleep onset and reduces sleep duration.
3. Poor sleep quality was linked to daytime fatigue and reduced cognitive performance.

**Relevance to my research question (2-4 sentences):** This article supports the sleep-quality component of my study. It explains biological mechanisms such as light exposure affecting

circadian rhythms. The findings help connect screen habits with measurable brain and behavioural outcomes.

**Notes / useful quote / key statistic (optional):** Night-time screen use significantly delays melatonin release.