

# Effects of Using Screen Time on Sleepiness During the Day and Depression in Youth



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# Introduction

**Adolescents experience rapid physical, cognitive and psychosocial growth.**

~~----- can make adolescents vulnerable to mental health problems.~~

An estimated 10-20% of adolescents globally experience mental health conditions, yet these remain underdiagnosed and undertreated(1).

**Globally, depression is one of the leading causes of illness and disability among adolescents.**

**The consequences of not addressing adolescent mental health conditions extend to adulthood, impairing both physical and mental health and limiting opportunities to lead fulfilling lives as adults.**

# Significance of the Study

- Adolescence is a crucial period for developing and maintaining social and emotional habits important for mental well-being. These include adopting healthy sleep patterns;
  - taking regular exercise;
  - developing coping,
  - problem-solving,
  - interpersonal skills;
  - learning to manage emotions.
- Promoting psychological well-being and protecting adolescents from adverse experiences and risk factors are critical for their well-being during adolescence.
- Supportive environments in the family, at school and in the wider community are also important.



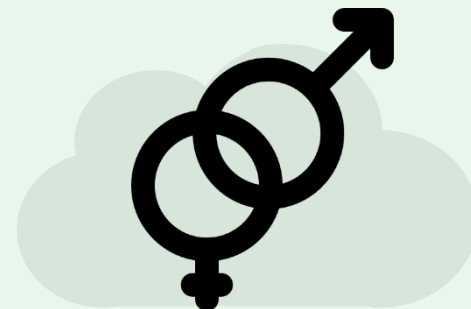
# Significance of the Study



Multiple factors determine mental health outcomes. The more risk factors adolescents are exposed to, the greater the potential impact on their mental health



Factors that can contribute to stress during adolescence include a desire for greater autonomy, pressure to conform with peers, exploration of sexual identity, and increased access to and use of technology.



Media influence and gender norms can exacerbate the disparity between an adolescent's lived reality and their perceptions or aspirations for the future.

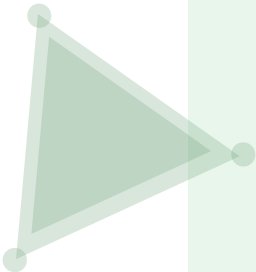
# Significance of the Study

- Mental health promotion and prevention interventions aim to strengthen an individual's capacity
  - to regulate emotions,
  - enhance alternatives to risk-taking behaviours,
  - build resilience for difficult situations and adversities,
  - promote supportive social environments and social networks.
- These programs require a multilevel approach with varied delivery platform
  - Ex: digital media, health or social care settings, schools or the community, and varied strategies to reach adolescents, particularly the most vulnerable.



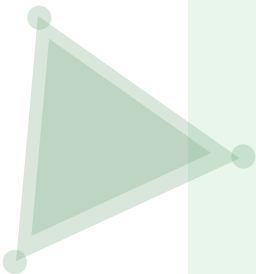
# Significance of the Study

- Using screen becomes a common life style for most youth people today.
- The use of screen increases immobility time for most youth.
- However, few studies explore how the time of using screen of 3 C products influence sleepiness during the day and depression in the youth.



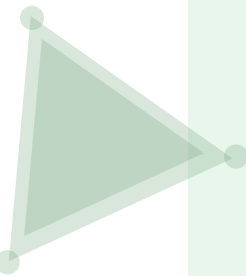
# Study Purposes

- The study was to explore the associations between the time of using the screen and sleepiness during the day in the youth students.
- The study was to explore the associations between the time of using the screen and the depression symptoms in the youth students.



# Research Questions

- Is there any association between the time of using the screen and the scores of sleepiness during the day in youth students?
- Is there any association between the time of using the screen and depression symptoms in the youth students ?





# Research Framework

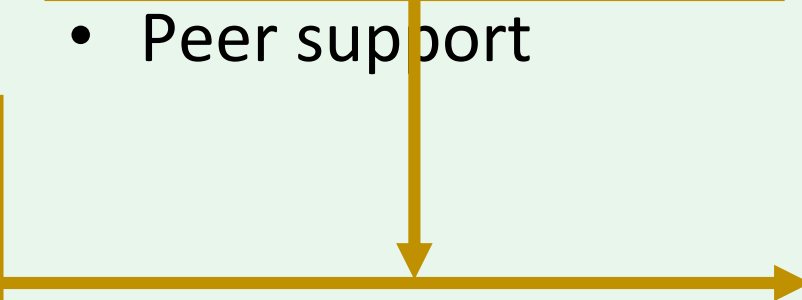


- Gender
- Age
- religion
- illness
- Family support

- Peer support

Time for using screening of 3C products

Depression symptoms  
Sleepiness during the day



# Method

- Design: cross-sectional and descriptive correlation study design
- Screening time: the time of watching the screens of computer, communication and **C**onsumer-Electronics
- Sleepiness during day time: measured by the Epworth Sleepiness Scale (ESS)
- Depression: symptoms: measured by the Center for Epidemiologic Studies Depression Scale (C-CES-D)

# Samples and Setting

- Convenience sampling was used to recruit college students
- Study Setting: A medical college in northern Taiwan
- Samples:
  - Students entered the college more than 6 months,
  - Agree to participate in the study,
  - Agree to complete the questionnaires,
  - Agree to record the time of using screen of 3 C products
- Sample size: There were total 150 students completed the questionnaires and the record of the time of using screen.



# Measurement

- Demographic sheet
- Sheet for recording the time of using screens

## Sleepiness

- Epworth Sleepiness Scale, ESS
- 4-point likert scale  
0~24 points, if  $\geq 16$ , means sleepy

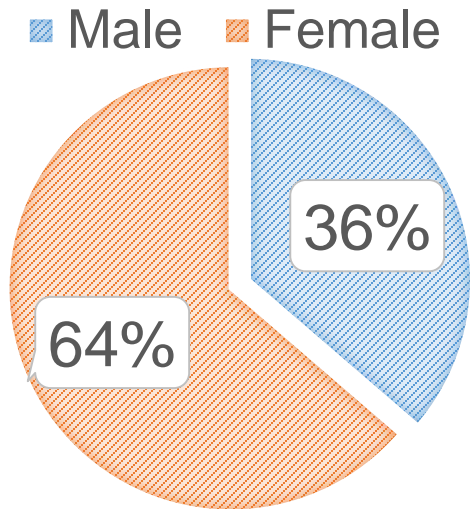
- Alpha= 0.82

## Depression

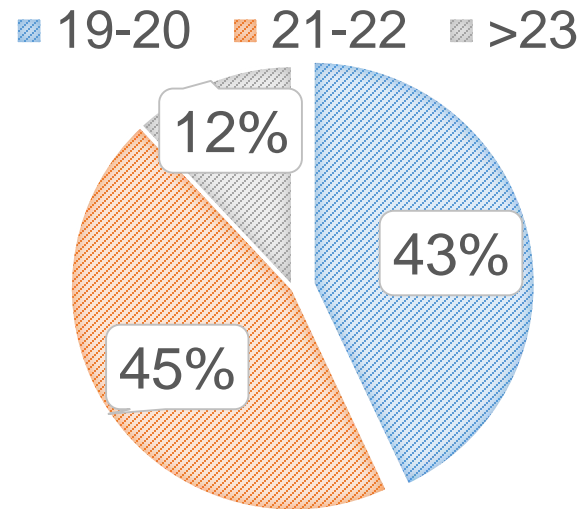
- C-CES-D: 20 items
- 4-point likert scale  
0~60 points, if  $\geq 15$ , means depression
- Alpha= 0.82

# Result-1

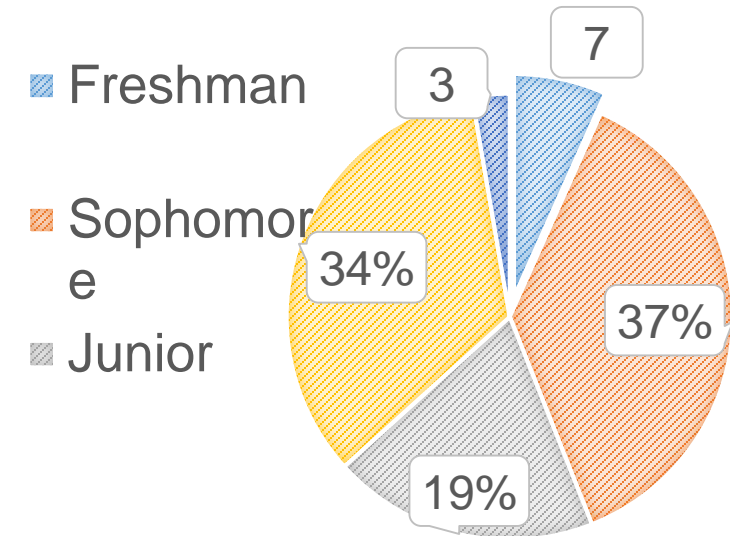
- Total 150 college students
- Students' demographic characteristics:



**Gender**



**Age**



**Grade**

# Result-2

- ◆ Comparisons of the mean of the time of using screen, scores of sleepiness during the day and depression symptoms between the male and female students (N150)

Dependent Variable	Male (n = 55)	Female (n = 95)	F	p
	Mean (SD)	Mean (SD)		
Time of using screen	7.41(2.16)	7.48(2.51)	0.024	0.878
Sleepiness scores	8.58 (2.94)	7.59(3.23)	3.51	0.063
Depression	11.96 ( 5.60 )	12.34 ( 7.00 )	0.11	0.736

# Result-3

- ◆ Factors influence the sleepiness scores during the day in the youth of a medical college (N=150)

Variable	B	SE	Wald Chi-square	P	95% Confidence Interval	
					Lower	Upper
Gender	-1.20	0.59	4.22	0.040	-2.35	-0.06
Potential illness	-0.54	0.79	0.46	0.498	-2.09	1.02
Time of using screen	0.07	0.12	0.32	0.573	-0.16	0.29

# Result-4

- ◆ Factors influence the depression scores (C-CES-D score) in the youth of a medical college (N=150)

Variable	B	SE	Wald Chi-square	P	95% Confidence Interval	
					Lower	Upper
Gender	0.22	1.09	0.04	0.842	-1.91	2.35
Potential illness	-1.19	1.45	0.67	0.413	-4.04	1.66
Time of using screen	0.18	0.22	0.65	0.421	-0.26	0.61



# Discussion

- In current society, it is very popular to use 3 C products.
- Almost everyone has a mobile phone and tablet, and they need to use them at any time.
- Using a 3C screen has become an indispensable part of life.
- Although the study results are not significant in the association between the time of using screen and the sleepiness and depression, it may be due to the small sample size and lack of control of the related factors.
- Future studies can further develop more rigid study and further explore the associations between the time of using screen and the mental health in the youth.

# Conclusions

- The time of using screen did not significantly influence sleepiness during the day and depression due to small sample size in the youth.
- More studies are needed to explore the influences of using screen time on sleepiness and depression.