



Association between Instagram addiction and well-being: the role of resilience and self-esteem

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Key messages

- Instagram addictions is associated with lower positive and worse negative mental health status.
- Resilience and self-esteem are protective factors for the potential harm of Instagram addiction.

Introduction

- Instagram has become one of the most popular social media platforms worldwide, particularly among young adults.
- Previous studies have found that social media use was associated with depression, anxiety, body dissatisfaction, and loneliness (Lup et al., 2015; Vannucci et al., 2017; Wirtz et al., 2020).
- Few studies have focused on Instagram, and research on young adults' positive mental health is still limited. Therefore, this study aims to explore the relationship between Instagram addiction, subjective well-being (SWB), and depression among college students, as well as the moderating effects of resilience and self-esteem.

Methods

- Sample:** 441 undergraduate students in Taipei, Taiwan
- Sampling method:** convenience sampling
- Date:** December 2022 to February 2023
- Measurement tool:** paper-based questionnaires
 - Instagram addiction – Instagram Addiction Scale (Kircaburun & Griffiths, 2018)
 - SWB – questions adapting from OECD Guidelines (OECD, 2013)
 - Depression – Center for Epidemiologic Studies Depression Scale (CES-D) (Radloff, 1977)
 - Resilience – Resilience Scale for Adults (Friborg et al., 2006)
 - Self-esteem – Rosenberg Self-Esteem Scale (Rosenberg, 1965)
- Data analysis:** t-test, Chi-square test, Multiple linear regression

Results

- The mean Instagram usage time was 67.4 minutes per day.
- After adjusting for potential confounders, **Instagram addiction was negatively associated with life satisfaction, eudaimonia, positive affect, and positively associated with negative affect and depression.**
- Resilience and self-esteem moderated the link between addiction and mental health.** The correlation was stronger in the low resilience and low self-esteem groups.

Table 1. Baseline sociodemographic characteristics of participants by Instagram addiction

		Low Addiction	High Addiction	P-value
		n (%) or mean(SD)	n (%) or mean(SD)	
Age ^a		21.14 (1.81)	20.90 (1.32)	0.14 [*]
Gender ^b	Male	136 (41.0%)	33 (31.4%)	0.08 [*]
	Female	196 (59.1%)	72 (68.6%)	
BMI ^b	Normal	206 (62.2%)	77 (74.0%)	0.11 [*]
	Underweight	67 (20.2%)	18 (17.3%)	
	Overweight	39 (11.8%)	6 (5.8%)	
	Obese	19 (5.7%)	3 (2.9%)	
Sleep condition ^b	Normal	273 (81.7%)	94 (88.7%)	0.09 [*]
	Sleep deprivation	61 (18.3%)	12 (11.3%)	
Perceived health ^b	Good	135 (40.9%)	39 (36.8%)	0.45
	Poor	195 (59.1%)	67 (63.2%)	
Perceived stress ^b	Low	248 (74.25%)	87 (82.9%)	0.07 [*]
	High	86 (25.75%)	18 (17.1%)	
Grade ^b	Freshman or sophomore	124 (37.35%)	52 (49.1%)	0.03 [*]
	Junior or senior	208 (62.65%)	54 (50.9%)	
Major ^b	Humanities	55 (16.6%)	21 (19.8%)	0.45
	STEM	276 (83.4%)	85 (80.2%)	
Class ranking ^b	≤ 20%	84 (25.5%)	16 (15.7%)	0.003 [*]
	20.1 - 40.0%	75 (22.8%)	42 (41.2%)	
	40.1 - 60.0%	107 (32.5%)	28 (27.5%)	
	60.1 - 100.0%	63 (19.2%)	16 (15.7%)	
Father education ^b	High school or below	77 (23.3%)	18 (17.0%)	0.33
	Undergraduate	150 (45.5%)	55 (51.9%)	
	Graduate	103 (31.2%)	33 (31.1%)	
Mother education ^b	High school or below	84 (25.5%)	17 (16.2%)	0.14 [*]
	Undergraduate	170 (51.5%)	59 (55.2%)	
	Graduate	76 (23.0%)	29 (27.6%)	
Personal monthly income ^b	Less than NTS 6000	99 (30.1%)	25 (23.6%)	0.37
	NTS 6001 - 10000	101 (30.7%)	40 (37.7%)	
	More NTS10000	85 (25.8%)	30 (28.3%)	
	Not fixed	44 (13.4%)	11 (10.4%)	
IG account privacy ^b	Open	62 (18.7%)	23 (21.7%)	0.50
	Private	269 (81.3%)	83 (78.3%)	
Strangers following ^b	Low	248 (77.0%)	71 (68.3%)	0.07 [*]
	High	74 (23.0%)	33 (31.7%)	
Social Comparison ^a		38.34 (6.17)	40.31 (5.71)	0.004 [*]
Body image ^a		20.33 (4.56)	20.72 (4.86)	0.44

A total count of variables may vary because of missing data.
a. t-test.
b. Chi-square test.

Table 2. Association between Instagram addiction and mental health

	Addiction	
	Crude β (95% CI) ^a	Adjusted β (95% CI) ^{b,c}
SWB		
Life satisfaction	-0.06 (-0.10 ~ -0.03)**	-0.07 (-0.01 ~ -0.03)***
Eudaimonia	-0.08 (-0.13 ~ -0.04)**	-0.08 (-0.13 ~ -0.04)**
Positive affect	-0.03 (-0.05 ~ -0.01)*	-0.03 (-0.06 ~ -0.01)*
Negative affect	0.06 (0.04 ~ 0.08)***	0.056 (0.03 ~ 0.08)***
Depression	0.16 (0.12 ~ 0.21)***	0.17 (0.13 ~ 0.21)***

^ap-value < 0.05, ^{**}p-value < 0.01, ^{***}p-value < 0.001.

^a. Simple linear regression.

^b. Multiple linear regression.

^c. Results were adjusted for age, gender, BMI, sleep condition, stress, grade, class ranking, mother education, strangers following, body image, social comparison.

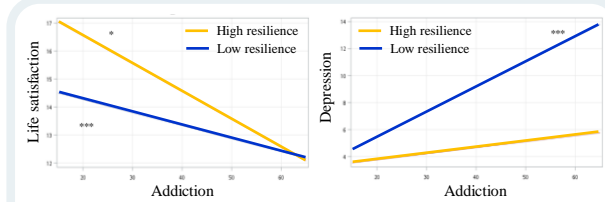


Figure 1(A)(B). The interaction effect of Instagram addiction and resilience on life satisfaction & depression

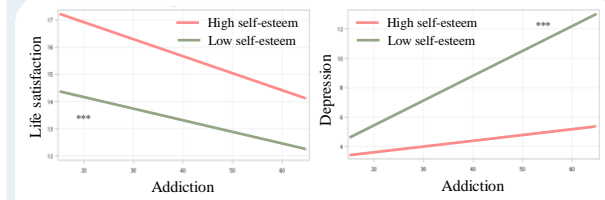


Figure 2(A)(B). The interaction effect of Instagram addiction and self-esteem on life satisfaction & depression

Results were adjusted for age, gender, BMI, sleep condition, stress, grade, class ranking, mother education, strangers following, body image, social comparison.

Discussion

- In this study, college student with higher addiction to Instagram reported poorer mental well-being. A systematic review (Lopes et al., 2022) indicated that the relationship between social media use and depression was frequently related to problematic social media use. Therefore, **it is suggested that mental health status is associated with addictive behaviors, rather than duration of social media use.**
- This study found that resilience and self-esteem are protective factors for potential harm of Instagram addiction. Both resilience and self-esteem can be cultivated effectively by interventions (Ferreira et al., 2021; Niveau et al., 2021). **Education on proper use and interventions promoting resilience and self-esteem are recommended to mitigate the negative impacts of Instagram addiction on mental health.**

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