PROBLEMATIC INTERNET USES AND DEPRESSION IN ADOLESCENTS: A META-ANALYSIS

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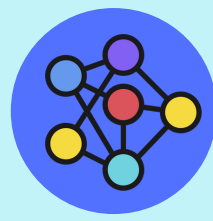Alejandra Cortés-Pascual

INTRODUCTION

The addictive use of the Internet is related to various health problems

The relationship between addiction and depression is mixed

Support the need to understand the relationship between pathologies and social networks

METHODOLOGY

Is there a relation of comorbidity between problematic-addictive use of the Internet and depression in adolescents? meta-analysis

- Search strategy
- Instruments used to measure both problematic Internet use and depression

Table 1. Psychometric instruments		
Author	**Problematic use instrument**	**Depression instrument**
El-Asam et al.	Problematic Internet Use (PIUQ)	Patient Health Questionnaire 9 (PHQ)
Woods & Scott	Social Integration and Emotional Connection subscale of the Social Media Use Integration Scale	Hospital Anxiety and Depression Scale
Walburg et al.	Internet Addiction Test (AIT)	Center for Epidemiologic Studies Depression Scale (CES-D)
Sami et al.	Internet Addiction Test (AIT)	Center for Epidemiologic Studies Depression Scale (CES-D)
Colder-Carras et al.	Video Game Addiction Test (VAT)	Depressive Mood List
Banjanin et al.	Young Internet Addiction Test, designed by the authors	Center for Epidemiologic Studies of Depression Scale for Children (CES-DC)
Kircaburun et al.	Ten-item Internet gaming disorder test (IGDT-10)	UCLA Loneliness Scale-Short form (ULS-4)
Jun	KCYPS	Korean Manual of Symptom Checklist
Chang et al.	Chen Internet Addiction Scale (CIAS)	Center for Epidemiologic Studies Depression Scale (CES-D)
Lin and others	Chen Internet Addiction Scale (CIAS)	Ko's Depression Inventory
Zhang et al.	Beard's Diagnostic Questionnaire for Internet Addiction	Self-Rating Depression Scale (SDS)
Gámez-Guadix et al.	Generalized Problematic Internet Use Scale 2	Brief Symptom Inventory
Oberst et al.	Questionnaire of experiences related to mobile phone use (CERM)	Self-report Hospital Anxiety and Depression Scale (HADS)

RESULTS

Search Strategy

19 samples in 13 selected studies comprised a total of 33,748 individuals (n=33.748)

12 - 18 years old (μ=15,68)

different cultures and continents (Europe, Euro-Asia, America and Asia)

Statistical Analysis

	Study name		Statistics for each study				Correlation and 95% CI
Correlation		Lower limit	Upper limit	Z-Value	p-Value		
0,456	El Asam et al. (2019)	0,419	0,492	20,948	0,000		
0,470	Woods & Scott (2016)	0,396	0,538	10,987	0,000		
0,230	Walburg et al. (2016)	0,117	0,337	3,940	0,000		
0,410	Sami (2018)	0,343	0,473	10,916	0,000		
0,270	Banjanin et al. (2015)	0,168	0,366	5,052	0,000		
0,350	Kircaburun et al. (2019)	0,234	0,456	5,650	0,000		
0,340	Jun (2016) a	0,299	0,379	15,329	0,000		
0,270	Jun (2016) b	0,228	0,311	11,985	0,000		
0,266	Jun (2016) c	0,223	0,308	11,799	0,000		
0,250	Lin et al. (2018)	0,210	0,289	11,890	0,000		
0,102	Chang et al. (2014) a	-0,013	0,214	1,740	0,082		
0,171	Chang et al. (2014) b	0,058	0,281	2,938	0,003		
0,251	Chang et al. (2014) c	0,129	0,365	3,981	0,000		
0,184	Chang et al. (2014) d	0,071	0,292	3,173	0,002		
0,436	Zhang et al. (2013)	0,268	0,578	4,765	0,000		
0,370	Gamez - Guadix et al. (2013) a	0,310	0,427	11,271	0,000		
0,336	Gamez- Guadix et al. (2013)b	0,275	0,395	10,144	0,000		
0,179	Colder et al. (2017)	0,059	0,294	2,913	0,004		
0,340	Oberst et al. (2017)	0,294	0,384	13,553	0,000		
0,305		0,263	0,346	13,463	0,000		

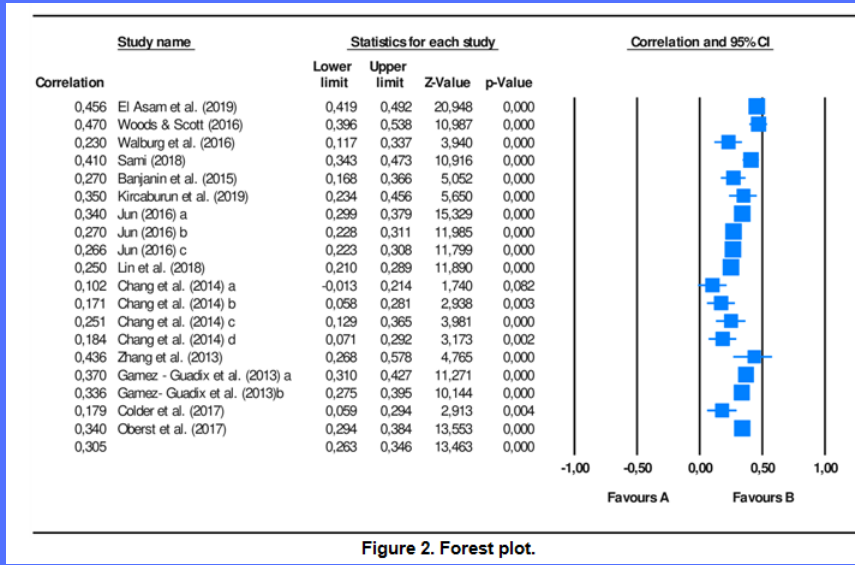-1,00 -0,50 0,00 0,50 1,00
Favours A   Favours B

Figure 2. Forest plot.

CONCLUSIONS

There was a consensus among most of the studies, indicating that there was a significant and positive correlation between problematic Internet use and depression in adolescents

Correlation between pathologic uses of the Internet and depression. Moreover, meta-regression test results showed that 9% of the variance (R2=0.09) is associated with the male gender

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