

# Meta Analysis on Perceived Social Support and Internet Addiction

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Abstract: The increasing use of the internet in everyday life as a consequence of the development of information technology was unavoidable. One of the consequences of the increase in internet use was the emergence of excessive internet use or what was known as internet addiction. This study wanted to see the correlation between internet addiction and perceived social support by testing the product moment correlation results from 11 journals that examine related topics with a total sample of 16,513 respondents. Statistical test showed a medium effect size correlation of  $r = -0.301$  (95% CI between  $-0.392 - -0.211$ ) thus indicating that perceived social support is not a strong predictor (medium effect size) of internet addiction. There was publication bias that can be seen from the Eiger's Publication Bias value of  $p = 0.033$ . The implication of this research was about the necessity to conduct research involving other factors that may establish internet addiction. This was due to perceived social support was not yet a strong predictor of internet addiction, so it was necessary to investigate whether there were other factors, both external and internal to individuals, that could be strong predictors for the formation of internet addiction behavior.

## 1 INTRODUCTION

The increasing use of the internet in everyday life as a consequence of the development of information technology is unavoidable. One consequence of the increase in internet use is the emergence of excessive internet use or known as internet addiction. The prevalence of world internet addiction according to Cheng and Li (2014) has reached 6%, with countries with the highest prevalence at 10.9% being countries located in the Middle East region, and countries with the lowest prevalence at 2.6% being countries located in the Middle East region, Northern Europe, and in Western Europe. In Indonesia, Siste, et al (2020) stated that the prevalence of internet addiction in adults has reached 14.4%.

Internet addiction according to APA (2015) is a pattern of behavior shown by excessive use of computers both online and offline which results in difficulties and distractions. Meanwhile, Kandell

(1998) stated that internet addiction is defined as a form of psychological dependence on the internet, which is indicated by the characteristics, including an increase in the use of resources in activities related to internet use, unpleasant feelings (for example, anxiety, depression, or feeling empty) when not in an online condition, there is an increased tolerance for the effects felt when carrying out online activities, and there is a denial that the behavior of using the internet is problematic. The characteristics of internet addiction itself according to Young and de Abreau (2011) include the existence of salience, it is when the activity of using the internet becomes the most important thing in life, there are changes in mood, there is tolerance, there are withdrawal symptoms, there are interpersonal and intrapersonal conflicts as a result of internet usage activity, and the presence of relapse or a tendency to return to addictive behavior.

One factor that is believed to be correlated with the level of internet addiction is perceived social

support. Hirao (2017) suggests that one study shows that internet addiction has a positive correlation with low academic achievement, as well as inadequate social support and communication skills. Self-perceived social support according to Sarafino and Smith (2017) is a form of support that comes from various sources, including from partners, family, friends, or from community groups, where this support can be felt or perceived as comfort, concern, and assistance available when needed.

Several studies have attempted to examine the correlation between the two variables. A previous meta-analytic study was conducted by Lei, Li, Chiu, & Lu. (2018) against 76 research journals with a total sample of 47,899 showed a negative correlation between social support and internet addiction with a medium effect size, but this research was still limited to China.

There are three reasons why this research is important to do. First, the prevalence of addiction requires an explanation of the influencing factors. Second, in previous research there has been a meta-analysis by finding a medium correlation effect size but still limited to the population in China. Third, there is no research that uses regional as moderator.

## 2 METHOD

Literature data collection was carried out by conducting a literature search on Science Direct and Google Scholar using the keywords "Internet Addiction" and "Social Support", either a single search for each keyword or a combination of the two keywords.

Scientific articles that have been obtained are then selected based on appropriate criteria, including (1) the research literature used published between 2011 and 2022 (2) is a study with quantitative methods that measure the correlation between the variables Internet Addiction and Perceived Social Support (3) literature has data in the form of the number of research samples, the type of measuring instrument used for both variables and the value of the correlation coefficient between the two variables.

From 11 literature journals that met the criteria, 16,513 research sample subjects were obtained. Data in the form of the number of samples and Pearson correlation coefficient values were analyzed through the meta-analysis method using the Jamovi software Version 2.0.0 for Windows.

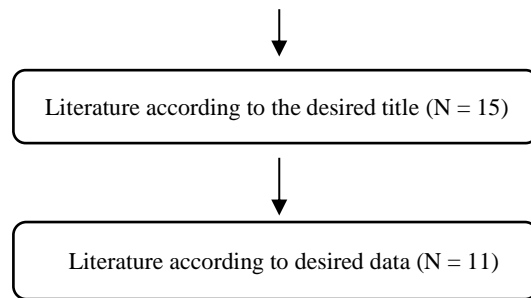
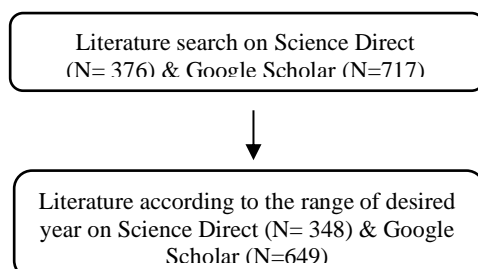


Figure 1: Literature Selection Flow.

## 3 RESULT

The research characteristics in Table 1 show a total of 16513 N values originating from 3 regions, namely the Asian region (Taiwan, Kuwait, Hong Kong, PRC, Turkey, and Iran), the European region (Germany, France, and Italy), and the North American region (United States), with a range of years of publication between 2013 and 2022).

From the meta-analysis testing of 11 studies, it was found that Perceived Social Support has a negative correlation with Internet Addiction with a medium size effect correlation value of  $r = -0.301$  (95% CI from -0.39 to -0.21). In addition, there is a publication bias that can be seen from the Eiger's Publication Bias value of  $p = 0.033$ .

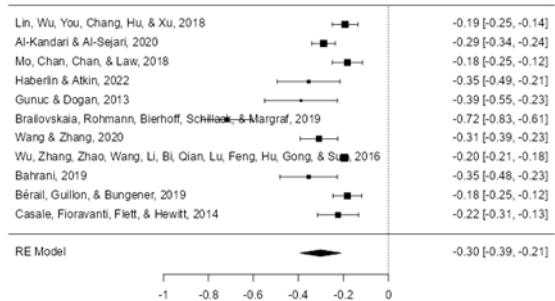


Figure 2: Forrest Plot.

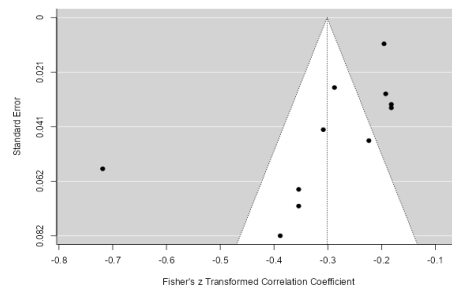


Figure 3: Funnel Plot.

Table 1: Characteristics of the 11 studies included in the meta-analysis.

No	Name, Year	N	r	Region	PSS scale	IA scale
1	(Lin, Wu, You, Chang, Hu, & Xu, 2018)	1206	-0.19	Asia (Taiwan)	SSS	CIAS-R
2	(Al-Kandari & Al-Sejari, 2020)	1431	-0.28	Asia (Kuwait)	SSS	SPAS
3	(Mo, Chan, Chan, & Law, 2018)	862	-0.18	Asia (Hongkong)	MSPSS	CIAS
4	(Haberlin & Atkin, 2022)	200	-0.34	Northern America (USA)	MSPSS	IAT
5	(Gunuc & Dogan, 2013)	150	-0.37	Asia (Turkey)	MSPSS	IAT
6	(Brailovskaia, Rohmann, Bierhoff, Schillack, & Margraf, 2019)	309	-0.616	Europe (Germany)	F-SozU K-14	BFAS
7	(Wang & Zhang, 2020)	560	-0.299	Asia (PRC)	PSS	PIUS
8	(Wu, Zhang, Zhao, Wang, Li, Bi, Qian, Lu, Feng, Hu, Gong, & Sun, 2016)	10,158	-0.193	Asia (PRC)	SSRS	IAT
9	(Bahrani, 2019)	240	-0.34	Asia (Iran)	MSPSS	ATQ
10	(Bérail, Guillon, & Bungener, 2019)	932	-0.18	Europe (France)	MSPSS	IAT
11	(Casale, Fioravanti, Flett, & Hewitt, 2014)	465	-0.22	Europe (Italy)	MSSSS	GPIUS2

## 4 DISCUSSION

The meta-analysis test on 11 journals shows a medium size effect between perceived social support and internet addiction. According to DiClemente (2018) in relation to the relationship between social support and addiction in general, social support in general can be a protective factor, especially in the early stages of addiction. It seems that if a person has an extensive social support system and interacts with several individuals who have already become addicts, then the possibility of participating in addictive behavior is more limited when compared to other individuals who do not have an extensive social support system. So this can be a protective factor that slows the transition from use to abuse or addiction.

With the results of the effect size showing a medium value, it indicates that perceived social support alone is not a strong predictor of internet

addiction. These results are consistent with previous studies conducted by Lei, Li, Chiu, & Lu. (2018) which states that there is a medium effect size between social support and internet addiction with relatively heterogeneous research subjects. The results of the medium effect size meta-analysis can occur because the two variables do not have a direct effect relationship, this is because perceived social support is more of a protective factor than being a predictor factor for internet addiction. In addition, this medium effect size can also be caused by the heterogeneity of the measuring instruments used, both for perceived social support and for internet addiction. The Eiger's Publication Bias result of  $p = 0.033$  indicates that there is publication bias in the study.

Retnawati, et al. (2018) states that publication bias can occur if published research tends to include only significant data, while non-significant data is not published. The sample range between 150 and 10.158 is also thought to have an effect on the emergence of publication bias.

## 5 CONCLUSIONS

The implication of this research is that research should be carried out involving other factors that shape internet addiction. This is because perceived social support is not yet a strong predictor for internet addiction, so it is necessary to examine whether there are other factors, both external and internal to

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