Narcissism and Social Media Addiction: Gender, Social Demographics, and Social Media Use

Yuda Syahputra[1], Ifdil[*)2], Merri Hafni[3], Solihatun[1], Tri Windi Oktara[4], Lira Erwinda[5]
[1]Department of Guidance and Counseling, Universitas Indraprasta PGRI, Indonesia.
[2]Department of Guidance and Counseling, Universitas Negeri Padang, Indonesia.
[3]Faculty of Psychology, Universitas Medan Area, Indonesia.
[4]UIN Sultan Maulana Hasanuddin Banten, Indonesia.
[5]Department of Guidance and Counseling, Universitas Bina Bangsa, Serang, Indonesia.
[*)]Corresponding author, ✉e-mail: ifdil@konselor.org

Abstract

This study aims to describe differences in narcissism and social media addiction based on gender, social demographics, and use of social media. This research is a comparative student, the sample for this study amounted to 123 students in Vocational High School (SMK) in DKI Jakarta. There are two instruments used in this study, namely, the narcissistic instrument (22 items) and the social media addiction instrument (17 items). Data were analyzed using descriptive analysis and Multivariate One-Way Analysis of Variance Model (MANOVA). The findings for this study indicate that there are significant differences in narcissistic and social media addiction variables based on gender, number of social media accounts, and gender-daily internet access. In addition, there is a significant difference in social media addiction based on domicile. Gender and the order of children in the family are also significantly different on the variables of social media addiction. Based on the results of this study, it is hoped that further researchers will link other variables (for example: self-esteem, loneliness, subjective well-being, stress, etc.) to prevent narcissistic behavior and social media addiction in education.

Keywords: Narcissism, Social Media Addiction, Gender, Domicile, Internet access.

Introduction

The use of social media has increased sharply over the last few years (Alizamar et al., 2019), activities that were previously carried out directly or in person, have begun to shift to social media (Afdal et al., 2019). The number of online social networking site (SNS) users worldwide reached around 2.46 billion in 2017, and it is estimated that there will be around 3.09 billion social media users worldwide by the end of 2021 (Statista, 2020). The following is facts about the increase in social media every month, namely Facebook (FB) with 2.45 billion active users; Instagram (IG) has 1 billion active users (Statista, 2020). People tend to use social media because by using social media they get something different that they don't get anywhere else (Güneç, 2022). Social media is like a double-edged sword, it brings many benefits to its users, but also has a negative impact if it is used excessively (Müller et al., 2016; Sandjajaa &

Syahputra, 2019; Syahputra, Prayitno, et al., 2019), especially for mental and social well-being (Sagita et al., 2020).

Continued use can lead to social problems, such as neglecting friends and family, being left behind at work or school, or neglecting one's physical health, all of which can contribute to negative emotional states (Casale & Banchi, 2020). This condition is supported (Liu et al., 2019) the existence of a significant relationship between excessive social media with poor psychological well-being, and low self-esteem. A systematic review conducted (Frost & Rickwood, 2017) of 65 studies found a positive association between intensive FB use and symptoms of major psychiatric disorders (e.g., anxiety, depressive symptoms, body dissatisfaction, and eating disorders). Kuss & Griffiths (2017) also argue that excessive use of social media is associated with behavioral addiction, which in extreme cases can manifest itself in anti-social symptoms, and a loss of tolerance or empathy.

Several recent studies argue that the popularity of social media is an increase in the level of narcissism in today's society (Mehdizadeh, 2010). In particular, social media involves communication features that are different from offline communication and may suit narcissistic tendencies (Valkenburg & Peter, 2011). Social media offers a lot of information about other people's lives related to personal perceptions and feelings (Singhwee, 2017), as a result there is a social comparison, whether other people have a better life than me (Singhwee, 2017). There are three narcissistic characteristics of social media proposed by (Valkenburg & Peter, 2011) among others, easy access to a large number of other individuals (the opportunity to send information related to oneself and receive feedback about oneself); users can choose the information they want to disclose about themselves; and communication on social media gives users the opportunity to carefully craft their self-presentation. Narcissists are often associated with those who brag, take pictures and then show them off to others on their social media in order to get high self-views and traits such as strength and physical beauty (Andreassen et al., 2017). A person with narcissistic tendencies takes advantage of others for their personal gain and has little empathy for others (Marshall et al., 2015).

In addition, the Diagnostic and Statistical Manual of Mental Disorders formally recognizes narcissistic personality disorder, which is a pathological form of narcissism in terms of a high level of self-interest, fantasies of unlimited success, feelings of special and uniqueness, lack of empathy, envy, and pride (American Psychiatric Association, 1994). However, more moderate and non-clinical levels of narcissism are sometimes good because they are perceived as self-confidence and self-affirmation (Cambell et al., 2000). Social media serves as a satisfying medium for people with high levels of narcissism, in particular (Choi, 2018). In fact, social media increases psychological dependence, when they show ambition and success to gain respect and recognition on social media (Choi, 2018). Another study (Singhwee, 2017) found sensation seeking, narcissism, and social comparison were positively related to the behavior of active use of online social networks. This study was adapted to fill a gap from previous research on the relationship between narcissistic behavior and social media addiction. Because there is no explanation regarding the differences between men and women, social demographics in narcissistic behavior and addiction to social media in detail. Therefore, this study examines differences in narcissism and social media addiction based on gender, social demographics (domicile and order of children in the family) and use of social media (daily internet). access and number of children). social media accounts).

Method

This study uses a quantitative approach with a comparative descriptive method. Sampling using incidental sampling technique (non-probability sampling), the sample in this study amounted to 123 students (male = 56.9%; female = 43.1%) in Vocational High School in DKI Jakarta (details of respondents can be seen in table 1). There are two instruments used in this study, namely, the first narcissistic instrument (22 items) which was developed from the theory (Budiargo, 2015) which measures 3 dimensions, namely, 1) self-love, 2) self-esteem, 3) self-admiration; The two social media addiction instruments (17 items) were developed from theory (Griffiths, 2016) which measures 6 dimensions, namely 1) salience, 2) mood modification, 3) tolerance, 4) withdrawal symptoms, 5) conflict, and 6) relapse. Both instruments use four points with a Likert rating scale model including the answer choices: strongly agree to strongly disagree. As for the sound of one item from the narcissist "*Every friend group on my social media is always the admin*"; one of the social media addiction items "*I'm not calm if I haven't opened the notification.*"

Table 1. Research Respondent Data

| Gender | | Social Demographics | | | | Use of social media | | | |
| | | Domicile | | Order of Children in the Family | | Daily Internet Access | | Number of Accounts | |
Code	%	Code	%	Code	%	Code	%	Code	%
Male	56.9	City	90.2	First	40.7	4-6 Jam	37.4	1-3	53.7
Female	43.1	Village	9.8	Second	38.2	> 6 Jam	62.6	4-6	42.3
				Third	19.5			> 6	4.1
				Fourth	1.6				

Table 2. Narcissistic Instrument Quality (22 items) and Social Media Addiction (17 items)

Estimation	Velues
* Narcissistic Instruments	
Item Reliabilities	.98
Person Reliabilities	.90
Cronbach Alpha (KR-20)	.91
Separation index of Item	7.21
Mean Item	.00
Mean person	0.18
Mean INFIT MNSQ item	.96
Mean INFIT MNSQ person	.93
Mean OUTFIT MNSQ item	.97
Mean OUTFIT MNSQ person	.97
Raw variance explained by measures	52.5%
* Social Media Addiction Instruments	
Item Reliabilities	.95
Person Reliabilities	.81
Cronbach Alpha (KR-20)	.83
Separation index of Item	4.32
Mean Item	.00
Mean person	.93
Mean INFIT MNSQ item	.98
Mean INFIT MNSQ person	.99
Mean OUTFIT MNSQ item	.97
Mean OUTFIT MNSQ person	.97
Raw variance explained by measures	36.5%

The quality of the two instruments was tested using the Rasch model, the results of the reliability test of the narcissistic instrument were large (.98), meaning that the consistency of the narcissistic instrument was in the very good category. Furthermore, the variance value is 52.5%, this means that the unidimensional condition of the instrument has been reached (> 20%; Bond & Fox, 2015; Linacre, 2011), 22 items in the narcissistic instrument are representative for measuring. The same is true for the quality of the instrument. Social media addiction is in a very good condition for measuring, as evidenced by the reliability value on the work commitment scale of (.95) with 36.5% variance value, meaning that 17 items on the social media addiction instrument are representative for measuring (table 2). , both instruments show a good fit of Fit items (INFIT and OUTFIT MNSQ values) for measuring because the MNSQ average is in the ideal range (ideal fit is in the MNSQ INFIT/OUTFIT range 0.5 – 1.5 logit; Bond & Fox, 2015; Marsinun et al., 2020; Sumintono & Widhiarso, 2015; Suranata & Ifdil, 2020; Syahputra, Sandjaja, et al., 2019) (Table 2).

Data were analyzed using Descriptive Analysis and Multivariate One-Way Analysis of Variance Model (MANOVA) with the help of JASP software (Goss-Sampson, 2019), there are several that will be analyzed in this study, namely: 1) descriptive test, 2) testing narcissistic conditions and social media

addiction based on gender, 3) testing narcissistic conditions and social media addiction based on social demographics, 4) testing narcissistic conditions and social media addiction based on social media use, and 5) Multivariate One-Way Analysis of Variance Model (MANOVA) test) was used to examine the differences between the two variables: narcissism and social media addiction based on gender, social demographics (domicile and area of residence), and social media use (daily internet access and number of social media).

Results and Discussions

To achieve the research objectives, the researcher conducted four tests: 1) descriptive test, 2) testing narcissistic conditions and social media addiction based on gender, 3) testing narcissistic conditions and social media addiction based on social demographics, 4) testing narcissistic conditions and social media addiction based on social media use, and 5) testing Multivariate One-Way Analysis of Variance Model (MANOVA) was used to examine the differences between the two variables: narcissism and social media addiction based on gender, social demographics (domicile and area of residence), and social media use (daily internet access and number of social media).

Narcissistic Descriptive Test and Social Media Addiction

Table 3. Narcissistic Descriptive Results and Social Media Addiction

	Narcissistic	Social Media Addiction
Mode	67	55
Median	63	54
Mean	58.52	51.63
Std. Error of Mean	0.93	0.61
Std. Deviation	10.31	6.76
Variance	106.25	45.76
Skewness	-0.77	-0.88
Kurtosis	0.52	0.38

The results of the descriptive test show that the value of the central tendency in the narcissistic data is M = 58.52, Md = 63, Mode = 67 (Table 3). The tendency for the narcissistic score is at a score of 67, and the distribution to the data is 10.31. The skewness value in narcissistic data shows a negative value of 0.77, meaning that most of the data tend to be skewed to the right side of the curve. Meanwhile, the results of the descriptive test of social media addiction were M = 51.63, Md = 54, Mode = 55 (Table 3). Tendency The score for social media addiction is at a score of 55, and the distribution of data is 6.76. The skewness value in the social media addiction data shows a negative value of 0.88, meaning that most of the data tend to be skewed to the right side of the curve.

Table 4. Results of Narcissistic Categorization and Social Media Addiction

	Category	Interval Score	f	%
Narcissistic	Very high	> 75	0	0
	High	62 – 74	67	54.5
	Moderate	49 – 61	29	23.6
	Low	36 - 48	23	18.7
	Very low	< 35	4	3.2
Social	Very high	$\geq$ 58	20	16.3
Media	High	48 – 57	71	57.7
Addiction	Moderate	38 – 47	29	23.6
	Low	28 – 37	3	2.4
	Very low	$\leq$ 27	0	0

Students' narcissism is in the high category with a percentage value of 54.5%, meaning that students have a high narcissistic attitude when playing social media (Table 4). Meanwhile, social media addiction is in the high category (57.7%), meaning that students are highly addicted to social media (table 4). This proves that students need to be given intervention with guidance and counseling services to reduce narcissism and social media addiction.

Testing of Narcissism and Social Media Addiction based on Gender and Recent Education

Table 5. Narcissistic Descriptive Test Results and Social Media Addiction Based on Gender

| | Narcissistic | | Social Media Addiction | |
	Male	Female	Male	Female
n	70	53	70	53
Mode	67	52	55	59
Median	65	52	54	51
Mean	61.9	54.1	53	49.9
Std. Error of Mean	1.01	1.5	0.6	1.14
Std. Deviation	8.5	10.9	5.0	8.3
Variance	71.6	118.6	24.9	68.9
Skewness	-1.63	-0.01	-1.26	-0.35
Kurtosis	1.65	-0.77	1.1	-0.57

The data from both narcissistic instruments and social media addiction showed that men (n = 70) were more dominant in filling out the scale than women (n = 53), this means that more men answered narcissistic and social media addiction instruments. Based on narcissistic conditions (M = 61.9) and addiction to social media (M = 53) male students had higher average scores than female students. Furthermore, to clarify the narcissistic condition and addiction to social media by gender, it is presented in Figure 1 below.
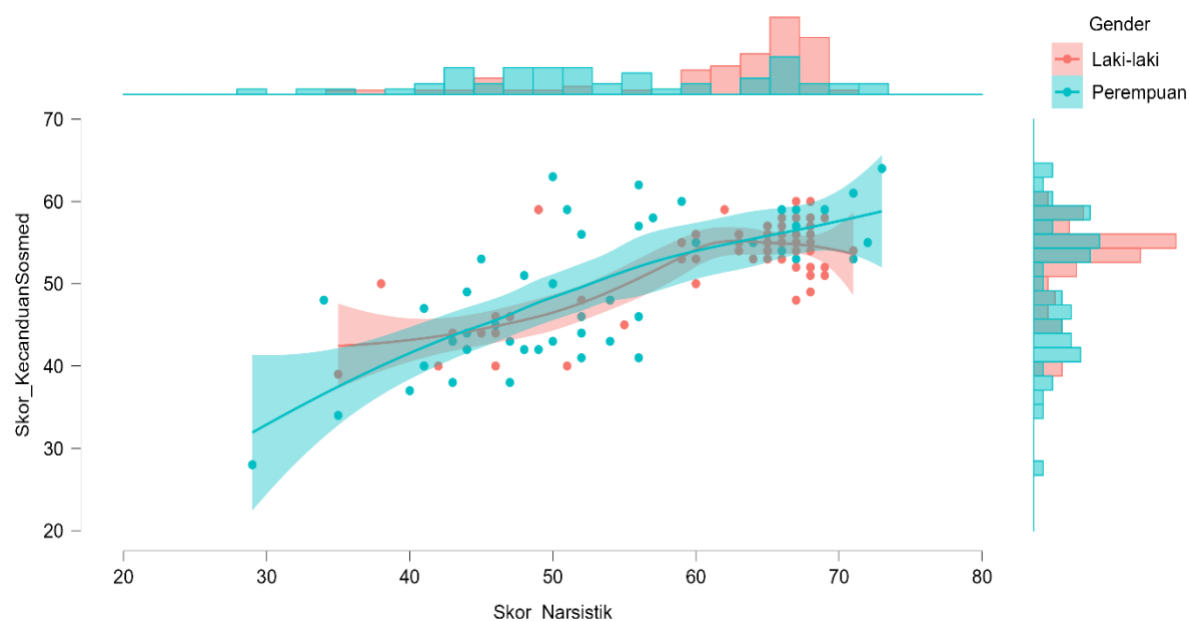

Figure 1. Narcissistic Scatter Plot and Social Media Addiction by Gender

Based on the scatter plot, male students' narcissism and addiction to social media are higher than female students, as evidenced by the red histogram compared to blue. This condition strengthens the results from table 1 which explains that the average narcissistic and social media addiction of male students is higher than that of female students.

Testing narcissistic conditions and social media addiction based on social demographics

Narcissistic conditions and addiction to social media based on social demography were analyzed by heatmaps, social demographics in this study investigated two aspects, namely: domicile and order of children in the family.
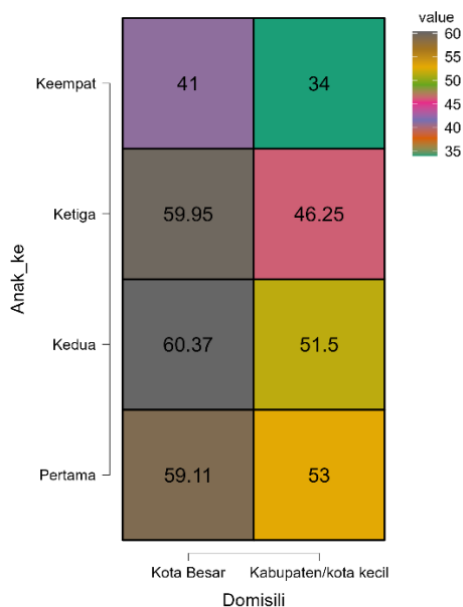

Figure 2. Narcissistic Heatmaps Based on Social Demographics
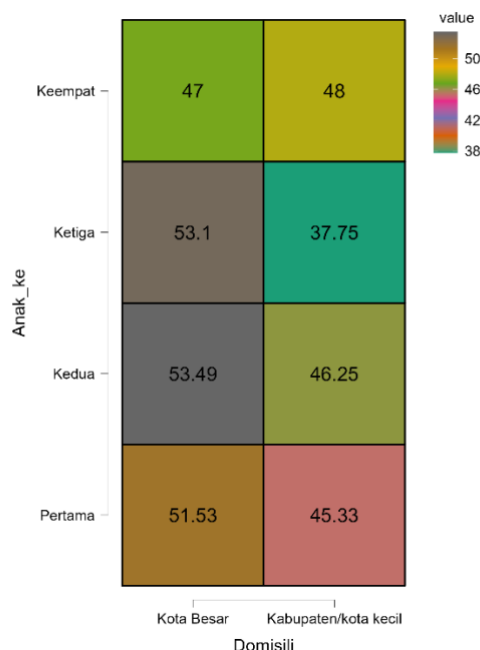

Figure 3. Heatmaps of Social Media Addiction Based on Social Demographics

The two heatmaps show the average value of narcissism and social media addiction based on social demographics (domicile and order of children on the family). The results on the heatmaps show that students from areas where they live in big cities are more narcissistic and addicted to social media than those from village. Furthermore, students from the second child within the family indicated higher narcissism and addiction to social media than students from other children (Figures 2 and 3).

Testing Narcissistic Conditions and Social Media Addiction Based on Social Media Use
Narcissistic conditions and addiction to social media based on social media use were analyzed using heatmaps, the use of social media in this study investigated two aspects: daily internet access and number of social media accounts.
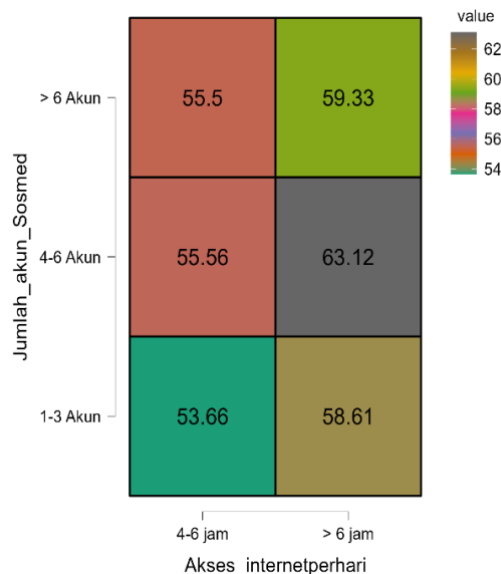

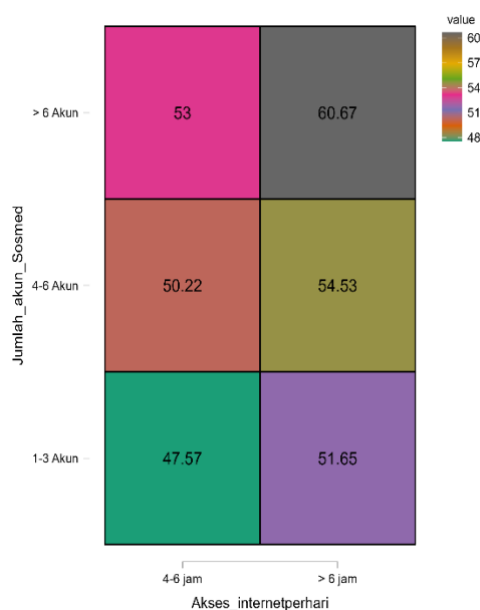**Figure 4.** Narcissistic Heatmaps Based on Social Media Use

Figure 5. Social Media Addiction Heatmaps Based on Social Media Use

The two heatmaps show the average value of narcissism and social media addiction based on social media use (daily internet access and number of social media accounts). The results on heatmaps show that students who are indicated to be narcissistic and addicted to social media, are on internet access more than six hours per day. Furthermore, students who have more than six social media accounts tend to use internet access more or more than six hours per day to become addicted to social media.

Testing Multivariate One-Way Analysis of Variance Model (MANOVA)
The condition of the two variables of narcissism and social media addiction based on gender, social demographics, and use of social media has been explained by descriptive testing, to prove the significance

of these differences, the researchers used MANOVA analysis. Furthermore, the Multivariate One-Way Analysis of Variance Model (MANOVA) was used to examine the differences between the two variables: narcissism and social media addiction based on gender, social demographics (domicile and area of residence), and use of social media (internet access per day and number of social media; table 6).

Based on these empirical results, this study highlights several findings. First, table six shows that there are significant differences in narcissistic and social media addiction variables based on gender (male and female), number of social media accounts (1-3 accounts, 4-6 accounts, and more than 6 accounts), and gender-daily internet access (4-6 hours and > 6 hours). In addition, there is a significant difference in social media addiction based on domicile (city and village). Gender and the order of children in the family are also significantly different on the variables of social media addiction. Another finding shows that the narcissistic variable is influenced by gender, social demographics, and the use of social media by 46.6%, smaller than the social media addiction variable which is 50.9% influenced by gender, social demographics, and use of social media.

Second, students from areas where they live in big cities are more narcissistic and addicted to social media than those from village, and students from the second child within the family are indicated to be more narcissistic and addicted to social media than students from other children. In line with several studies, exploring individual differences in terms of narcissism has found that it is positively associated with different online social networking activities (Malik & Khan, 2015; Ryan et al., 2014; Wang et al., 2012). A social media post consisting of images can affect individuals, and trigger negative emotions in the viewer (Rozgonjuk et al., 2020), these negative emotions lead to narcissistic attitudes in individuals. Narcissists are often associated with those who brag, take pictures and then show off to others on their social media in order to get high self-views and traits such as strength and physical beauty (Andreassen et al., 2017; Ifdil et al., 2017).

The third finding, male students' narcissism and addiction to social media were higher than female students, as evidenced by the mean value of narcissism (M = 61.9) and social media addiction (M = 53) male students were higher than female students. In contrast to research (Mohan, 2018) found that women pay more attention to self-image and appearance compared to men when carrying out their activities on Facebook. Women share five times more photos, have larger social networks, and spend more time on Facebook than men (Mohan, 2018; Panek et al., 2013). Those who seek approval based on the views of others have much more active social media profiles, especially when it comes to photos (Mohan, 2018). In addition, self-esteem and feelings that are channeled in social media play an important role in the socio-emotional demands of narcissism (Choi, 2018).

The fourth finding, students who are indicated to be narcissistic and addicted to social media, are on internet access more than six hours per day, and students who have more than 6 social media accounts tend to use internet access more or more than 6 hours per day to become addicted to social media. In line with research conducted by (Kibona & Mgaya, 2015) found that 48% of respondents tend to use social media for about 5-7 hours per day without considering the time that has been spent. Children in Taiwan spend 11 hours per week using either a smartphone or tablet (Chang et al., 2019). Research conducted (Resti, 2015) stated that of 50 respondents said 98% had social media features such as Instagram, Twitter, Facebook, YouTube, Photo Editor, Online Games, as entertainment media. Respondents are always active in using this application, with a duration of more than 5 hours a day. Meanwhile, as many as 10 respondents spent time playing social media compared to interacting with other people. Excessive internet use is caused by weak self-control (Özdemir et al., 2014) individuals to manage the time in using the internet every day. Based on the results of this study, it is hoped that further researchers will link other variables (for example: self-esteem, loneliness, subjective well-being, stress, etc.) and other factors that influence narcissism and social media addiction, and provide interventions to men regarding behavior prevention. narcissism and social media addiction among students to improve student learning outcomes in the future

Table 6. Results of Multivariate One-Way Analysis of Variance Model (MANOVA)

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	Narcissistic	6018.624ᵃ	36	167.184	2.071	.003
	Social Media Addiction	2840.178ᵇ	36	78.894	2.474	.000
Intercept	Narcissistic	74304.650	1	74304.650	920.238	.000
	Social Media Addiction	62127.997	1	62127.997	1948.326	.000
Gender	Narcissistic	964.484	1	964.484	11.945	.001
	Social Media Addiction	254.593	1	254.593	7.984	.006
Domicile	Narcissistic	110.268	1	110.268	1.366	.246
	Social Media Addiction	357.010	1	357.010	11.196	.001
Order of Children in the Family	Narcissistic	357.374	3	119.125	1.475	.227
	Social Media Addiction	51.350	3	17.117	.537	.658
Daily internet access	Narcissistic	249.161	1	249.161	3.086	.083
	Social Media Addiction	74.517	1	74.517	2.337	.130
Number of social media accounts	Narcissistic	508.057	2	254.029	3.146	.048
	Social Media Addiction	381.451	2	190.725	5.981	.004
Gender * Domicile	Narcissistic	41.109	1	41.109	.509	.477
	Social Media Addiction	1.475	1	1.475	.046	.830
Gender * Order of Children in the Family	Narcissistic	33.524	2	16.762	.208	.813
	Social Media Addiction	67.736	2	33.868	1.062	.350
Gender * Daily internet access	Narcissistic	393.851	1	393.851	4.878	.030
	Social Media Addiction	165.007	1	165.007	5.175	.025
Gender * Number of social media accounts	Narcissistic	3.455	1	3.455	.043	.837
	Social Media Addiction	17.891	1	17.891	.561	.456
Domicile * Order of Children in the Family	Narcissistic	223.382	2	111.691	1.383	.256
	Social Media Addiction	243.619	2	121.809	3.820	.026
Domicile * Daily internet access	Narcissistic	63.375	1	63.375	.785	.378
	Social Media Addiction	20.167	1	20.167	.632	.429
Domicile * Number of social media accounts	Narcissistic	74.893	2	37.446	.464	.630
	Social Media Addiction	30.321	2	15.161	.475	.623
Order of Children in the Family * Daily internet access	Narcissistic	21.898	2	10.949	.136	.873
	Social Media Addiction	80.247	2	40.123	1.258	.289
Order of Children in the Family * Number of social media accounts	Narcissistic	52.862	3	17.621	.218	.884
	Social Media Addiction	87.518	3	29.173	.915	.437
Daily internet access * Number of social media accounts	Narcissistic	32.429	2	16.215	.201	.818
	Social Media Addiction	16.604	2	8.302	.260	.771
Total	Narcissistic	434192.000	123			
	Social Media Addiction	333511.000	123			
Corrected Total	Narcissistic	12962.699	122			
	Social Media Addiction	5582.537	122			

a. R Squared = .464 (Adjusted R Squared = .240)
b. R Squared = .509 (Adjusted R Squared = .303)

Conclusions

The findings for this study indicate that there are significant differences in narcissistic and social media addiction variables based on gender, number of social media accounts, and gender-daily internet access. In addition, there is a significant difference in social media addiction based on domicile. Gender and the order of children in the family are also significantly different on the variables of social media addiction. Another finding shows that male students' narcissism and addiction to social media are higher than female students. Based on the results of this study, it is hoped that further researchers will link other variables (for example: self-esteem, loneliness, subjective well-being, stress, etc.) and other factors that influence narcissism and social media addiction, and provide interventions to men regarding behavior

prevention. narcissism and social media addiction among students to improve student learning outcomes in the future.

References

Afdal, A., Alizamar, A., Ifdil, I., Ardi, Z., Sukmawati, I., Zikra, Z., Ilyas, A., Fikri, M., Syahputra, Y., & Hariyani, H. (2019). An Analysis of Phubbing Behaviour: Preliminary research from counseling perspective. *1st International Conference on Educational Sciences and Teacher Profession (ICETeP 2018). Atlantis Press*, *295*, 270–273. http://creativecommons.org/licenses/by-nc/4.0/

Alizamar, A., Fikri, M., Afdal, A., Syahputra, Y., Sukmawati, I., & Ilyas, A. (2019). Phubbing Behavior: How it's Related to Happiness. *International Journal of Innovation, Creativity and Change*, *5*(6), 348–358.

American Psychiatric Association. (1994). *Diagnostic and Statistical Manual for Mental Disorders (4th ed.).* American Psychiatric Association.

Andreassen, C. S., Pallesen, S., & Griffith, M. D. (2017). The relationship between addictive use of social media, narcissism, and self-esteem: Findings from a large national survey. *Addictive Behavior*, *64*, 287–293.

Bond, T. G., & Fox, C. M. (2015). *Applying the Rasch Model, Fundamentals Measurement in the Human Science (3rd edition).* Routledge.

Budiargo, D. (2015). *Berkomunikasi ala net generation* (Eko B. Supriyanto (ed.); Cet.1). Elex Media Komputindo.

Cambell, W. K., Reeder, G. D., Sedikides, C., & Elliot, A. (2000). Narcissism and comparative self-enhancement strategies. *Journal of Research in Personality*, *34*, 329–347.

Casale, S., & Banchi, V. (2020). Narcissism and problematic social media use: A systematic literature review. *Addictive Behaviors Reports*, *11*, 100252.

Chang, F. C., Chiu, C. H., Chen, P. H., Chiang, J. T., Miao, N. F., Chuang, H. Y., & Liu, S. (2019). Children's use of mobile devices, smartphone addiction and parental mediation in Taiwan. *Computers in Human Behavior*, *93*, 25–32.

Choi, Y. (2018). Narcissism and social media addiction in workplace. *He Journal of Asian Finance, Economics and Business*, *5*(2), 95–104.

Frost, R. L., & Rickwood, D. J. (2017). A systematic review of the mental health outcomes associated with Facebook use. *Computers in Human Behavior*, *76*, 576–600.

Goss-Sampson, M. (2019). *Statistical analysis in JASP: A guide for students*. University of Greenwich.

Griffiths, M. D., Kuss, D. J., Billieux, J., & Pontes, H. M. (2016). The evolution of Internet addiction: A global perspective. *Addictive Behaviors*, *53*, 193–195. https://doi.org/10.1016/j.addbeh.2015.11.001

Güneç, Ç. B. (2022). *Social Media Addiction and Its Demerits*. https://www.researchgate.net/publication/363468382_Social_Media_Addiction_and_Its_Demerits

Ifdil, I., Denich, A. U., & Ilyas, A. (2017). Hubungan body image dengan kepercayaan diri remaja putri. *Jurnal Kajian Bimbingan Dan Konseling*, *2*(3), 107–113.

Kibona, L., & Mgaya, G. (2015). Smartphones' Effects on Academic Performance of Higher Learning Students. *Journal of Multidisciplinary Engineering Science and Technology*, *2*(4), 3159–40.

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), 311–322.

Linacre, J. M. (2011). *A User's Guide to WINSTEPS Ministeps Rasch-Model Computer Programs*. https://doi.org/ISBN 0-941938-03-4

Liu, D., Baumeister, R. F., Yang, C. C., & Hu, B. (2019). Digital communication media use and psychological well-being: A meta-analysis. *Journal of Computer-Mediated Communication*, *24*(5), 259–273.

Malik, S., & Khan, M. (2015). Impact of Facebook addiction on narcissistic behavior and self-esteem among students. *Journal of Pakistan Medical Association*, *65*(3), 260–263.

Marshall, T. C., Lefringhausen, K., & Ferenczi, N. (2015). The Big Five, self-esteem, and narcissism as predictors of the topics people write about in Facebook status updates. *Personality and Individual Differences*, *85*, 35–40. https://doi.org/10.1016/j.paid.2015.04.039

Marsinun, R., Erwinda, L., & Syahputra, Y. (2020). Homosexual and Transgender Tendencies in Terms of Gender: A Rasch Perspective. *In International Conference on Progressive Education (ICOPE 2019) Atlantis Press*, *422*, 358–361.

Mehdizadeh, S. (2010). Self-Presentation 2.0: Narcissism and Self-Esteem on Facebook. *Cyberpsychology, Behavior, and Social Networking*, *13*(4), 357–364.

Mohan, P. (2018). Narcissism : Study of Social media Addiction. *International Journal of Scientific Research in Computer Science Applications and Management Studies*, *7*(8), 1–3.

Müller, K. W., Dreier, M., Beutel, M. E., Duven, E., Giralt, S., & Wölfling, K. (2016). A hidden type of internet addiction? Intense and addictive use of social networking sites in adolescents. *Computers in Human Behavior*, *55*, 172–177. https://doi.org/10.1016/j.chb.2015.09.007

Özdemir, Y., Kuzucu, Y., & Ak, Ş. (2014). Depression, loneliness and Internet addiction: How important is low self-control? *Computers in Human Behavior*, *34*, 284–290. https://doi.org/10.1016/j.chb.2014.02.009

Panek, E. T., Nardis, Y., & Konrath, S. (2013). Mirror or Megaphone?: How relationships between narcissism and social networking site use differ on Facebook and Twitter. *Computers in Human Behavior*, *29*(5), 2004–2012.

Resti. (2015). Penggunaan Smartphone Dikalangan Mahasiswa Fakultas Ilmu Sosial Dan Ilmu Politik Universitas Riau. *Universitas Riau, 2 No 1*(Jom FISIP), 1–15.

Rozgonjuk, D., Sindermann, C., Elhai, J., Behaviors, C. M.-A., & 2020, undefined. (2020). Fear of Missing Out (FoMO) and social media's impact on daily-life and productivity at work: Do WhatsApp, Facebook, Instagram, and Snapchat Use Disorders mediate. *Elsevier*. https://doi.org/10.1016/j.addbeh.2020.106487

Ryan, T., Chester, A., Reece, J., & Xenos, S. (2014). The uses and abuses of Facebook: A review of Facebook addiction. *Ournal of Behavioral Addictions*, *3*(3), 133–148.

Sagita, D. D., Erwinda, L., & Syahputra, Y. (2020). Contribution of the Internet Uses to Student Morale: Study in High School. *In International Conference on Progressive Education (ICOPE 2019)*, 330–332.

Sandjajaa, S. S., & Syahputra, Y. (2019). Has a Fear of Missing Out Contributed to Phubbing Among Students? *International Journal of Innovation, Creativity and Change*, *5*(6), 219–230.

Singhwee, C. (2017). Sensation seeking, narcissism, social comparison and online social networking usage behavior of undergraduate students at Kasetsart University. *Interdisciplinary Research Review*, *12*(2), 31–37.

Statista. (2020). *Number of social media users worldwide from 2010 to 2021 (in billions)*. https://www.statista.com/statistics/278414/number-of-worldwide-social-network-users/

Sumintono, B., & Widhiarso, W. (2015). *Aplikasi Pemodelan Rasch pada Assessment Pendidikan*. Trim Komunikata.

Suranata, K., & Ifdil, I. (2020). The Psychometric Properties of Acceptable, Accessibility, and Feasibility Scale for Web-based School Resilience Training Program: A Rasch Analysis. *Journal of Physics: Conference Series*, *1539*(1), 012064.

Syahputra, Y., Prayitno, P., Syahniar, S., & Hariyani, H. (2019). Rasch stacking analysis of student internet addiction based on gender. *Jurnal Konseling Dan Pendidikan*, *7*(1), 35–41.

Syahputra, Y., Sandjaja, S. S., Afdal, A., & Ardi, Z. (2019). Development aninventory of homosexuality and transgender exposure (IHTE): A Rasch analysis. *Konselor*, *8*(4), 120–133.

Valkenburg, P. M., & Peter, J. (2011). Online communication among adolescents: An integrated model of its attraction, opportunities, and risks. *Journal of Adolescent Health*, *48*, 121–127.

Wang, J.-L., Jackson, L. A., Zhang, D.-J., & Su, Z.-Q. (2012). The relationships among Big Five personality factors, self-esteem, narcissim, and sensation-seeking to Chinese University students´ uses of social networking sites (SNSs). *Computers in Human Behavior*, *28*(6), 2313–2319.