

## **ADULT ATTACHMENT AND SOCIAL- DEMOGRAPHIC CHARACTERISTIC ASSOCIATED WITH SMARTPHONE ADDICTION IN INDONESIA**

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**Abstract:** Smartphones are basically electronic devices that can help human activities. The use of smartphones within reasonable limits can make a positive impact, but excessive use can lead to an addiction. This study aims to examine differences in adult attachment styles and characteristics of demographic groups on the level of smartphone addiction. The subjects are 602 adults over the age of 18 years, collected by accidental sampling method through the distribution of online questionnaires, using Smartphone Addiction Scale and Trend Relationship Scale (T-RSQ) questionnaires. The results of statistical tests using analysis of variance techniques showed that subjects with preoccupied adult attachment style had a significantly higher smartphone addiction than dismissing attachment style. Differences in smartphone addiction levels are also seen in different demographic characteristics. The female subject group aged 18-25 years, unmarried, high school educated and not yet working showed a higher average tendency of smartphone addiction than the male subject group, aged 26 years and over, married, having a bachelor's degree and working as a teacher.

**Keywords:** Smartphone Addiction, Adult Attachment, Attachment

### **BACKGROUND**

Advances in technology have been increasingly rapid in the past few decades, always providing the latest innovations to make it easier for humans to live their daily lives. Updates are continuously made to achieve higher effectiveness, including in terms of communication media in the form of cellular telephones. Starting from mobile phones which initially only had the main function to communicate via telephone and short messages, to mobile phones that have a myriad of functions and applications are called smartphones.

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Since the launch of smartphones in Indonesia in the 2000s, smartphone users have continued to grow from year to year. In 2018 there were 371.4 million smartphones used among Indonesia's 262 million population. This means that this usage reaches 142%, this is because one resident uses two or more smartphones (Indonesian Mobile Phone Users Reached 142% of the Population, 2017). The number of smartphone users in Indonesia is listed as the fourth rank of smartphone users in the world after China, India and the United States (Novalius, 2018). The survey results show the large use of smartphones among Indonesian people.

The use of smartphones as smart phones has differences from ordinary cellphones because smartphones have variants and advantages in the operational system (Shally, Vermaat, & Cashman, 2007). The functions contained in a smartphone have many uses and users take advantage of these tools to facilitate the activities of daily life, but many also make it a stress diversion to communicate and play games. The use of smartphones, which was originally to help, actually takes up a lot of users' time and affects other activities that should be done (Salehan & Neghaban, 2013).

A survey conducted by the Association of Indonesian Internet Service Providers (APJII), obtained data that the largest internet users in Indonesia are between the ages of 19-34 years (49.52%) and the most common devices used to access the internet are smartphones or tablets, which is 44.16% (APJII, 2017). Based on the survey results, it is known that the majority of smartphone users are those in early adulthood.

Various kinds of activities are assisted by this smartphone device. A survey conducted by SecurEnvoy revealed that young people aged 18-24 years are the age group most addicted to their cellphones. The more often individuals use smartphones, the more they become dependent on smartphones (Hong, Chiu, & Huang, 2012). If this behavior is not controlled and controlled, it will make the individuals addicted or dependent on smartphones which is called smartphone addiction. Smartphone addiction is an addictive behavior, loss of self-control due to preoccupation and excessive obsession with smartphone use (Kim, et al., 2015).

The rise of the phenomenon of smartphone addiction has prompted many researchers to conduct research related to the use of these devices. Various

studies have been conducted to determine the impact of smartphone addiction on the psychological aspects of its users. For example, research conducted by (Nur, Misrawati, & Utami, 2019) which proves that smartphone addiction has a negative effect on the psychological well-being of college students in Jakarta. Research conducted by Pearson & Hussain (2016) shows that smartphone addiction increases narcissistic tendencies in users.

The results of these studies indicate that smartphone addiction has a negative influence on the psychological aspects of its users. The same thing can be seen from the results of interviews and surveys conducted in the initial study of this study, which showed that 60% of respondents could not escape from their smartphones in carrying out their daily activities, 30% reported that work and completion of tasks were often delayed due to a lot of time seized to play smartphone. Several respondents mentioned that they feel uncomfortable when not holding their smartphone, and are ultimately compelled to open and access their smartphone even though there is no need or interest to do so.

The results of previous studies and observations in the field show that excessive smartphone use has a negative impact on addictive users. Therefore, it is also important to conduct further research that can analyze the predictors that affect the emergence and development of smartphone addiction to its users. This is necessary so that smartphone users who are still classified as fair use can pay attention to these predictors, so they can avoid excessive smartphone use that is classified as addictive.

Based on research conducted by Peele (1991), individuals who are prone to addiction are those who do not have intimacy or strong relationships with other people, feel less satisfied in their lives, lack self-confidence or do not have strong interests, or lost hope. Referring to the results of this study, researchers are interested in analyzing the intimacy or strength of interpersonal relationships that a person is associated with their smartphone use, thus the description of the strength of interpersonal relationships that acts as a predictor of smartphone addiction can be seen.

One of the main ideas in understanding intimate relationships is attachment theory (Hazan & Shaver, 1994). Attachment theory describes the universal human need to form affectionate attachments with others

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(Bowlby, 1983). Emotional attachment to certain people in life will lead to attached behavior to that person (attachment figure) which is relatively stable over time. Initially the bond is formed from the mother, family members, and eventually extends to other groups and becomes an important factor in shaping personality (Bowlby, 1969).

Initially, attachment theory was designed to explain the emotional attachment between infants and their caregivers, however Mario & Shaver (2008) explained that attachment is an important component in the human experience from birth to death. Both viewed attachment relationships as carrying an important role in emotional life in early adulthood. Gillath, Karantzas, & Fraley (2016) revealed that attachment figures in adults are peers such as close friends or romantic partners.

According to Barthlomew and Horowitz (1991), adult attachment style is a behavioral tendency of adult individuals in dealing with people who have certain meanings that are more emotional or affective. In adulthood, attachment quality is defined as a balance between seeking help from a particular figure and relying on oneself when facing difficulties, challenges, or crises. The quality of attachment plays a role in individual vulnerability or a protective factor in development throughout life (Bowlby, 1988). Barthlomew and Horowitz (1991) developed a theoretical model of adult attachment style into four forms, namely secure, preoccupied, dismissive, and fearful attachment style.

Individuals with a secure attachment style have positive beliefs about themselves and others, so they tend to seek solutions to problems together with their attachment figure and focus on the problem, so they are rarely exposed to psychological disorders, including addictive behavior. Meanwhile, the other three attachment styles, namely preoccupied, dismissive or fearful, have one or more negative views of themselves or attachment figures. Individuals with these attachment styles are quite susceptible to quite a variety of psychological problems (Barthlomew and Horowitz in Gillath, Karantzas, & Fraley, 2016).

## **RESEARCH METHODS**

This study uses quantitative methods with analysis of variant techniques, and model testing. An analysis of variant was conducted to determine differences in smartphone addiction in each attachment style (secure,

preoccupied, dismissive, and fearful). In addition, a model test study was also conducted to see differences in adult attachment style and smartphone addiction in subjects of different ages, genders, and work.

The money measuring instruments used are Smartphone Addiction Scale (SAS) and Trent Relationship Scales Questionnaire (T-RSQ). SAS was developed by Kwon, et al (2013) which has been adapted into Indonesian by Nurazizah and Misrawati (2018). T-RSQ is a measuring tool developed by Griffin and Barthlomew (1998), and later adapted into Indonesian by Deviana and Misrawati (2018).

## RESULT

The subjects in this study were adult individuals over the age of 18 from Jakarta, Bogor, Depok, Tangerang, South Tangerang, and Bekasi. The total number of respondents who filled out online questionnaires via google form was 632 people, but 602 were used as research subjects for data processing and 30 other respondents could not process data due to incomplete filling. The description of the research subject can be seen in the following table:

Table 1: Overview of Research Subjects

Variable	Classification	Frequency	Percentage
Gender	Male	145	24,1
	Female	457	75,9
Age	18-25	384	63,8
	26-30	70	11,6
	31-35	85	14,1
	36-40	39	6,5
	>40	24	4
Marital Status	Not Married	417	69,3
	Married	179	29,6
	Widow	7	1,2
Education	High-schooler	369	61,3
	Diploma	13	2,2
	Bachelor	156	25,9
	Post graduated	64	10,6
Occupation	Unemployed	44	7,3
	Entrepreneur	19	3,2
	Employee	168	27,9
	Government employee	18	3,0
	Teacher	72	12
	Medical personel	14	2,3
	House wife	30	5
	Students University	217	36
	Freelancer	20	3,3

Based on the table above, it can be concluded that research subjects based on gender are dominated by women, based on age are dominated by ages 18-25 years, based on marital status dominated by unmarried subjects, based on subject education is are dominated by high school graduates, and based on work are dominated by student.

### Descriptive Analysis

Descriptive statistical analysis on smartphone addiction scores was carried out by calculating the minimum, maximum, range, average, and standard deviation scores on the total score of all items on the smartphone addiction scale, and by comparing the scores based on empirical and hypothetical norms. Furthermore, the total score is also grouped based on the severity of the addiction. Meanwhile, descriptive analysis on adult attachment scores was carried out by grouping subjects based on their attachment styles and by calculating the frequency of subjects in each of these attachment styles.

Table 2: Descriptive Analysis of Smartphone Addiction Score

Criteria	Hypothesis	Empiricm
$X_{\min}$	0	10
$X_{\max}$	165	134
Range	165	124
Mean	82,5	59,34
SD	27,5	22,93

Based on descriptive analysis and on comparison between hypothetical and empirical values, the smartphone addiction score is lower than the researcher's assumption or provisional hypothesis. Smartphone addiction scores are further classified into 5 categories, which are described in the following table:

Table 3. Categorization of Smartphone Addiction Scale

Category*	Standard	Span			
		Hypothetical	F	Empirical	F
Normal	$X_{\min} < X \leq -1,5SD$	0 – 41	134	10 – 25	37
Mild	$-1,5SD < X \leq 0SD$	42 – 82	370	26 – 59	278
Moderate	$0SD < X \leq 1,5SD$	83 - 123	94	60 – 94	241
Severe	$1,5SD < X \leq X_{\max}$	124 – 165	4	95 – 134	46

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Total	602	602
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\*Based on Young & Abreu, 2017

Based on table 3 on the previous page, the majority of the subjects are in the category of mild addiction, whether assessed based on hypothetical norms or empirical norms. Significant differences were seen in the normal addiction category, where there were 134 subjects in this category based on hypothetical norms and only 37 people if grouped based on empirical norms.

Furthermore, descriptive analysis on the adult attachment scale variable was carried out to determine the frequency of each attachment style possessed by the subject. The results of the grouping can be seen in the following table:

**Table 4: Descriptive Analysis of Adult Attachment Scale**

Attachment Style	Frequency	Percentage
<i>Secure</i>	244	40,5
<i>Preoccupied</i>	93	15,4
<i>Dismissive</i>	218	36,2
<i>Fearful</i>	47	7,8
Total	602	100

Based on the table above, the most dominant attachment style is secure, followed by dismissive. That is, the majority of research subjects have a positive view of themselves, either followed by a positive view of others (secure), or not accompanied by a positive view of others (dismissive).

**Hypothesis Test Results**

Hypothesis testing in this study was carried out by statistical analysis of variance to determine differences in the level of addiction in each attachment style in adulthood. The results can be seen in the following table:

**Table 5: Hypothesis Test Results with ANOVA Test**

F Value	Significance	Conclusion
3,213	0,020	H <sub>1</sub> accepted

Based on the results of the ANOVA test, the value of  $F = 3.213$  with a significance of 0.023 was obtained. This means that the research hypothesis is accepted, namely that there is a significant difference in the average level of smartphone addiction in one or more adult attachment styles. These differences can be seen in the following table:

**Table 6: Average Smartphone Addiction in each Adult Attachment Style**

Adult Attachment	Frequency	Mean of Smartphone Addiction Score
Secure	244	60,282
Preoccupied	93	63,827
Dismissive	218	55,788
Fearful	47	61,978

Based on the table above, it is known that subjects with dismissive attachment style have the lowest average smartphone addiction score among other adult attachment styles, but the significance of these differences is not yet known. In order to determine the significance of differences in smartphone addiction levels in each adult attachment style, the researchers continued to conduct post hoc testing, the results of which can be seen in the following table:

**Table 7: Post Hoc Anova Test Results**

Adult attachment (I)	Adult attachment (J)	Mean Difference (I-J)	Significance
Secure	Preoccupied	-3,545	1,000
	Dismissive	4,494	0,209
	Fearful	-1,696	1,000
Preoccupied	Secure	3,545	1,000
	Dismissive	8.039*	0,027
	Fearful	1,849	1,000
Dismissive	Secure	-4,494	0,209
	Preoccupied	-8.039*	0,027
	Fearful	-6,190	0,552
Fearful	Secure	1,696	1,000
	Preoccupied	-1,849	1,000
	Dismissive	6,190	0,552

Based on the results of the post hoc test above, it is known that subjects with dismissive attachment style have a significantly lower smartphone addiction rate than subjects with preoccupied attachment style. The subject's smartphone addiction level on the secure and fearful attachment style is also higher than the subject's smartphone addiction level on the dismissing attachment style, but the difference is not significant.

### **Additional Analysis**

#### ***Differences in Aspects of Smartphone Addiction Based on Attachment Style***

Anova testing on each attachment style is carried out to determine the most prominent aspects of different adult attachment styles. Based on the results of the ANOVA test, the F value is 3.312 and the significance is 0.020 ( $p < 0.05$ ), and it is known that there are two aspects of smartphone addiction that have significant differences between the three adult attachment styles, while other aspects do not have significant differences. The test results can be seen in the following table:

Table 8: Differences in Aspects of Smartphone Addiction Based on the Post Hoc Test

<b>Dimension of Addiction Smartphone</b>	<b>Attachment Style</b>	<b>Mean Differences</b>	<b>Significance</b>
Daily Life activity	Preoccupied-Dismiss	1,395	0,32
Tolerance	Preoccupied-Dismiss	1,246	0,001
	Fearful-Dismiss	1,491	0,004

Based on the table above, it can be concluded that subjects who have preoccupied attachment style are most disturbed in the aspects of carrying out daily activities and have a higher level of tolerance for use due to their addiction, compared to subjects who have dismiss attachment style. Interestingly, although the overall addiction level of the subjects on the fearful attachment style is not significantly different from the subjects on the dismiss attachment style, their tolerance level for smartphone use is significantly higher than the dismissal attachment style.

***Differences in Smartphone Addiction based on Age, Gender, Marital Status, Education, and Occupation***

The results of the ANOVA test on differences in smartphone addiction based on age show that there are differences in the level of smartphone addiction at different age levels.

Table 9: ANOVA Test Results on Differences in Smartphone Addiction

F Value	Significance	Conclusion
21,611	0,000	H <sub>1</sub> accepted

The results of the post hoc test with Tukey HSD showed that subjects in the 18-25 year age range have a significantly higher smartphone addiction rate than other older age groups. Subjects in the age range of 26-30 years have a smartphone addiction rate that is significantly lower than subjects in the age range 18-25 years, significantly higher than subjects in the age range over 40 years, and does not have a significant difference in addiction levels with subjects in the age range of 26-30 years and in the age range 31-40 years.

Table 10. Tukey HSD Test Results Differences in Smartphone Addiction by Age

Age (I)	Age (J)	I-J	Significance
18-25 (MSA=65,02)	26-30 (MSA =55,20)	9.818	0,005
	31-35 (MSA =48,45)	16.567	0,000
	36-40 (MSA =45,46)	19.559	0,000
	>40 (MSA =48,45)	25.188	0,000
26-30 (MSA =55,20)	>40 (MSA =48,45)	15,370	0,023

MSA= mean of Smartphone Addiction

The results of the independent samples t test showed that the level of smartphone addiction for women is significantly higher than for men, as shown in the following table:

Table 11: Results of Independent Samples T-Test on Differences in Smartphone Addiction by Gender

T Value	Mean Differences	Significance	Conclusion
-2,698	-6,480	0,003	H <sub>1</sub> accepted

Smartphone addiction levels are also analyzed based on differences in the subject's marital status with the following results:

**Table 12: Anova Test Results of Differences in Smartphone Addiction Based on Marital Status**

<b>F Value</b>	<b>Significance</b>	<b>Conclusion</b>
30,677	0,000	H <sub>1</sub> accepted

Based on Tukey HSD's post hoc results, it is known that the widow/widower subject group has the highest average smartphone addiction while married subjects have the lowest smartphone addiction average. The significant difference is only found in the unmarried subject group and the married subject group. The significance of differences in smartphone addiction between groups of subjects based on their marital status can be seen in table 12.

**Table 13: Tukey HSD Test Results Differences in Smartphone Addiction Based on Marital Status**

<b>Marital Status (I)</b>	<b>Marital Status (J)</b>	<b>I-J</b>	<b>Significance</b>
Not Married (MAS=63,75)	Married (MAS=48,43)	15,318	0,000

Based on the results of the ANOVA test, it is known that there are significant differences in smartphone addiction at different levels of education illustrated in table 14.

**Table 14: ANOVA Test Results of Differences in Smartphone Addiction Based on Education**

<b>F Value</b>	<b>Significance</b>	<b>Conclusion</b>
10,665	0,000	H <sub>1</sub> Accepted

Significant differences are only found in the subject group at the high school education level which has a significantly higher smartphone addiction level than the subject group at the undergraduate and postgraduate education levels (Table 14). Meanwhile, in the other subject groups, the difference in the average level of smartphone addiction is not significant at the 95% confidence level.

**Table 15: Tukey HSD Test Results Differences in Smartphone Addiction Based on Education**

<b>Education Level (I)</b>	<b>Education Level (J)</b>	<b>I-J</b>	<b>Significance</b>
High School (MSA=65,02)	Under-Grad (MSA =55,20)	8,854	0,000
	Graduate (MSA=48,45)	14,107	0,000

\* MSA =Mean Smartphone Addiction

Furthermore, the researchers conducted the ANOVA test to determine differences in smartphone addiction based on the subject's occupational group, and the following results are obtained:

Table 16: ANOVA Test Results of Differences in Smartphone Addiction by Occupation

F Value	Significance	Conclusion
4,369	0,000	H <sub>1</sub> diterima

Based on the results of descriptive analysis, it is known that the subject group who has a job as a teacher has the lowest average smartphone addiction. The most significant difference is only found in the subject group who works as a teacher and the group of subjects who have not worked.

Table 17: Tukey HSD Test Results Differences in Smartphone Addiction by Occupation

Occupation (I)	Occupation (J)	I-J	Significance
Unemployed (MAS=64,16)	Teachers (MAS=49,46)	14,701	0,020

## DISCUSSION

This research is motivated by the emergence of symptoms of increasingly excessive use of smartphones in society, especially since the Covid 19 pandemic when more and more activities are carried out through smartphones. Excessive use of smartphones and interference with aspects of an individual's life can lead to addiction. The symptoms of smartphone addiction that seem to feel focused and very cool when using a smartphone, often look forward to the next smartphone use activity, feel the need to use a smartphone longer to feel satisfied, try to reduce smartphone use but fail, and often use a smartphone longer than previously planned.

There are several reasons that make certain individuals more susceptible to addiction than others. One of them is the inability to have strong intimacy or relationships with other people (Peele, 1991). There is no strong intimacy or connection with other people regarding one's ability to establish close relationships. One of the main ideas in understanding intimate relationships is attachment theory (Hazan and Shaver, 1994).

Departing from the background and assumptions above, the purpose of this study is to obtain empirical data regarding one or more adult attachment styles that have a higher smartphone addiction tendency than other attachment styles. Based on the results of hypothesis testing, it is known that there are significant differences in smartphone addiction scores between adult attachment styles, thus the hypothesis proposed in this study can be accepted.

In order to determine the type of attachment style that has the lowest and highest tendency for smartphone addiction scores, the researchers conducted post hoc testing through Bonferroni's calculations. The results obtained showed that subjects with dismissing attachment style had a lower average smartphone addiction score ( $M=55.79$ ) than subjects with preoccupied attachment style ( $M=63.83$ ), with a significance of  $p=0.027$  ( $p < 0.05$ ).

According to the adult attachment theory proposed by Bartholomew and Horowitz (1991), individuals with a dismissing attachment style have a positive view of themselves and a negative view of others. Individuals with a dismissing style have low trust in others, so they avoid deep intimacy with others. But behind that, they believe and view themselves positively as individuals who have the ability and potential. This causes them to become independent and rely on themselves to achieve their wants and fulfill their needs.

Carvallo and Gabriel (2006) explained that the characteristics of individuals with dismissing attachment style have a high level of confidence in living their lives without other people. This makes them rely on themselves to carry out activities and carry out their responsibilities. With these characteristics they are preoccupied with various activities and activities that must be completed by themselves, thereby reducing contact to access smartphones. The limited time to use a smartphone can avoid the development of tolerance and overuse that are characteristics of the addictive use of smartphones (Al-Barashdi, et al, 2015).

The results of the additional analysis conducted showed that there were differences in the level of smartphone addiction in demographic groups, such as age, gender, marital status, education, and occupation. Based on ANOVA and post hoc testing, it is known that the group of respondents

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aged 18-25 years, the female group, the unmarried group, the high school educated group and the group who have not worked have a higher smartphone addiction rate than other characteristics in a comparable group.

These groups have low job demands and have a lot of free time that does not require them to do various activities. For example, the unmarried respondent group has a higher smartphone addiction rate than those who are married. Unmarried individuals are generally only responsible for taking care of themselves, while married individuals need to pay attention to taking care of themselves, their spouses and children, so they have limited time to access smartphones in excess.

In the occupational demographic group, it is known that respondents who have not worked have a higher smartphone addiction rate than those who work as teachers. Teachers generally have active working time to deal with students about 5-8 hours per day, which makes them unable to access smartphones, outside of active working hours teachers usually have to prepare learning materials and equipment for the next teaching process, the use of smartphones on teachers also more aimed at supporting their work. In contrast to individuals who have not worked who do not have demands to complete work within a certain time limit, they actually have unlimited time to access smartphones, and this is an opportunity for the growth of high levels of intolerance and overuse in smartphone use.

Based on the analysis results and the dynamics of interpretation of research data, it can be concluded that the level of smartphone addiction tends to be high in the group of respondents who do not carry out various activities in daily life, both activities to support personal life and activities related to education and work. When viewed from the adult attachment style, the preoccupied respondent group, namely those who have positive beliefs about others and negative beliefs about themselves, tend to rely on other people in carrying out their activities, and tend to depend on other people's opinions, so they have the opportunity to be attached to smartphones. to connect with other people. In contrast to those who have a dismissal attachment style, those who have positive beliefs about themselves and negative beliefs about others, have a tendency to rely on themselves in every activity, so that they use more time to do activities that are their responsibility.

When viewed from demographic characteristics, respondents aged 18-25 years, unmarried, high school education background and not yet working have a higher smartphone addiction rate than those aged over 30 years, married, undergraduate or postgraduate education background, and working as a teacher. Individuals in the demographic group who are less demanding in doing activities within a certain time limit have a higher smartphone addiction level than individuals who have demands on their family, education and work. Thus the use of time is more used to carry out activities than using smartphones, so that opportunities for developing aspects of daily life disturbance, tolerance and overuse that indicate smartphone addiction can be anticipated.

The results of this study are in line with research conducted by Bouazza & Al-Barashdi (2016), which examined the causes and solutions for smartphone addiction in students at Sultan Qaboos University. One of the causes of addiction to using smartphones is the desire to establish and maintain social relations through social media that can be accessed from smartphones. Meanwhile, the solutions concluded through FGDs with participants showed that the solutions could be carried out by individuals, schools and parents. Individuals need to increase their positive assessment of their ability to be able to do something that is considered valuable, while the school and their parents suggest facilitating alternative activities for students and children so that their attention is not always focused on smartphones and their use does not develop into an addictive condition.

Basically a smartphone is an electronic device that can help human activities in daily life, education and work. However, anticipation of smartphone use needs to be considered so that it does not develop into an addictive use, because the benefits will turn into negative impacts. Many studies show the negative impact of smartphone addiction on psychological aspects, such as research conducted by Aprianti & Alhazami (2020) showing that smartphone addiction can reduce users' emotional intelligence and Hifizah, Misrawati, & Utami's research (2019) showing a negative impact on growth psychological well-being of users.

## **CONCLUSION AND SUGGESTION**

Based on the results of the research that has been done, it is found that there is a significant difference between smartphone addiction in dismissing attachment style and preoccupied attachment style. These

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results indicate that the tendency of individuals to relate and interact with the people around them can distinguish and be a predictor of their tendency to use smartphones. Individuals who believe in themselves and have a positive view of themselves but lack trust in others (dismissing attachment style) have a lower tendency to smartphone addiction compared to individuals who have a negative view of themselves, but trust and have a positive view of others (preoccupied attachment style).

Age, marital status, education level and occupation can affect the level of smartphone addiction. Subjects aged 18-25 years, unmarried, high school education background and not working have a higher smartphone addiction rate than those over 30 years old, married, have undergraduate or postgraduate education background, and work as teachers. This means that individuals who have less demands to do activities within a certain time limit have a higher smartphone addiction level than individuals who have demands on their family, education, and work.

Based on the results of the research that has been done, there are things that can be used as input. The following are theoretical suggestions and practical suggestions from the results of this study:

- The results of this study can be used as a reference for academics who will conduct research on the same theme. Subsequent research on the relationship between smartphone addiction and adult attachment style can be done by examining the variables that influence the tendency of high smartphone addiction to preoccupied attachment style. Further researchers can also conduct experimental research to test modules or treatments that can help individuals who have experienced smartphone addiction.
- For research subjects who have experienced smartphone addiction, it is recommended to review their views on themselves and views of others. Recognize your own abilities and potential so that you have a strong belief to carry out various activities based on your strengths, and not depend on others. For subjects who have not worked or have not had personal responsibilities independently, they can try to find and carry out activities in their spare time that can improve their abilities, so that the duration of smartphone use can be balanced.
- For schools, universities, government institutions and private institutions can hold interesting activities that can provide

opportunities for the community to be directly involved, develop their abilities and get smartphone-free experiences. Reducing online activities to offline can also be an alternative to help people not always be tied to their smartphones.

### **Informed Consent Statement**

All participants had granted their consent to this study.

### **Conflict of interest**

The author declared no conflict of interest

### **Ethics Statement**

The study was done compliance with the ethical guidelines.

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### **Contribution authors**

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### **Data Availability Statement**

All data is available upon request.

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