

ADDICTION ANALYSIS AND NEUROTICISM OF USE OF INSTAGRAM SOCIAL MEDIA ON PRODUCTIVE AGE IN JAVA ISLAND

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ABSTRACT

Social media has become an inseparable part of people's lives. People share their daily activities, experiences and opinions on social media. Social media has characteristics that require an extraordinary approach. Instagram is one of the most popular social media in Indonesia. This study aims to determine the correlation between Instagram usage and Neuroticism through excessive use of Instagram and can provide important information related to Instagram usage addiction to Instagram users. Neuroticism is described through a person's personality, such as the emergence of individualism, anxiety, fear, worry, irritability, FOMO, insecurity about other people's achievements, feeling inferior, becoming mentally unhealthy and forgetting responsibility. Many people complain that it is difficult to finish when using Instagram, and even their way to end it is by doing useless things. The method used is quantitative by distributing questionnaires to 400 productive-age respondents in Java Island. After that, the Structural Equation Model (SEM) was calculated using Smart PLS. The research model used in this study is a modification of several models, such as Big Five Personality Traits, DeLone and McLean, the Technology Acceptance Model, the Unified Theory of Acceptance and Use of Technology 2, and Lifestyle. The findings are that Information Quality, System Quality, Performance Expectancy, and Habit affect Instagram usage, while Perceived Ease of Use does not affect Instagram usage. In addition, it was also found that using Instagram affects a person's Neuroticism.

Keywords: *Big Five Personality Traits, DeLone and McLean, Instagram, TAM, UTAUT2.*

1. INTRODUCTION

The rapid development of science and technology has changed world civilization. This affects human life as a social being. Technology makes sharing or accessing information easy, but information overload can interfere with work and family time [1]. Today, the role of technology cannot be separated from the critical role of social media. Social media does not discriminate against lifestyle, gender, background, race, ethnicity, social status, user age and many other factors. The role of social media today has become a significant and essential need for every individual. Massive social interaction among social media users is currently a new habit that can lead to addiction [2][3][4]. The accessibility features of social media make it more convenient to use because it is not limited to desktops but can also be used on smartphones

connected to the internet [5]. This makes social media very popular with various groups. Ellison [6] identified three interaction modalities that occur in social media, namely initiation (acquainting with new people), information seeking (adding relationships) and maintenance (maintaining relationships and interacting). Three modalities of human interaction in social media's context complement how social communication occurs. Social media is an essential platform in today's digital era and is an essential part of internet culture [7]. The overall impact of social media is a shift in how humans communicate. It is globally interactive nature distinguishes today's social media from traditional communication tools, allowing users from anywhere to participate [8]. Ding [9] showed that smartphone addiction is triggered not by the device but by software applications.

An internet survey conducted by the Asosiasi Penyelenggara Jasa Internet Indonesia [10] using

survey parameters of internet penetration, internet users and internet usage frequency showed that in the second quarter of 2019-2020, internet users reached 196.71 million people or 73.7% of the total population of 266.91 million people in Indonesia. The contribution of each region's internet penetration rate to the total population of Indonesia in Java Island reached 41.7%. Internet penetration is Indonesia's percentage of internet users [10]. The average percentage of internet users from the total population per province in Java Island (DKI Jakarta (85.0%), Banten (78.5%), Central Java (76.8%), West Java (71.6%), D.I.Yogyakarta (71.0%), and East Java (66.3%)) was 74.9%. The average internet usage frequency in Indonesia in one day is more than 8 hours.

Another survey by Hootsuite [11] showed that Indonesia's average number of active social media users reached 191.4 million, or 68.9% of the total population of 277.7 million. Internet users in Indonesia are 204.7 million people, or about 73.7% of the total population. Compared to the same month in 2021, the number of active social media users in Indonesia increased by 12.6% or an increase of 21 million people, followed by an increase in internet users by 2.1 million users (year-on-year). Data shows that as of February 2022, Indonesia's productive age group of 15 to 64 years is 197.4 million people or 71.1% of the total population. The average time is 8 hours 36 minutes, followed by the average time spent using social media in one day for 3 hours 17 minutes. Hootsuite [11] surveyed the social media platforms most used by productive age internet users in Indonesia as of February 2022. The first are WhatsApp (88.7%), Instagram (84.8%) and Facebook (81.3%). Instagram ranks fourth with an average usage time of 16 hours per month. Most Instagram users in Indonesia are 52.3% female, higher than male-only 47.7%.

Apart from the benefits, social media certainly has other consequences to watch out for. Adolescents are prone to social comparisons when looking at themselves [12]. The high desire accompanied by easy accessibility to the activities and lives of others will potentially increase the tendency to make social comparisons. Those who regularly access social media for long hours experience anxiety (Neuroticism) when comparing themselves to their ideal partner. Another consequence is the tendency to see oneself as a depressed and alone individual. Another effect individuals experience when using social media is the Fear of Missing Out (FOMO). FOMO is the anxiety individuals experience when other people

are doing more enjoyable activities with or without them. This feeling is triggered by updates made by others through social media [13]. This lies behind the role of social media in the emergence of FOMO. In general, FOMO is a social activity in which individuals must continually connect with others. There must be impetus or motivation before FOMO occurs so that it can emerge as an action. The fact that social media use leads to FOMO is also reinforced by Przybylski [13], who found that individuals who experience FOMO are those who use social media excessively.

FOMO, indeed cannot be separated from personal actions using social media. Behavioral patterns of social media users can be reflected in personality traits [14]. This is because personality contains stable internal characteristics that underlie behavior [15]. One method commonly used to identify individual personality traits is the Big Five Personality Traits. Personality psychologists often use this approach because of its clarity, power, and conciseness in describing personality [16]. The Big Five Personality Traits have five components: agreeableness, conscientiousness, extraversion, openness, and neuroticism. Paul T. Costa & McCrae [17] describe neuroticism as the ability to adapt to emotional instability and the inability to conform. Neuroticism is a tendency to experience negative emotions, such as anxiety, sadness, fear, tension and feelings of tension [18]. Various negative emotions experienced by individuals with high Neuroticism are always accompanied by the feeling that they are in a dangerous situation [19]. Use to Neuroticism motivation is the result that occurs after the individual uses, in this case, uses social media. This is consistent with previous research showing that neuroticism predicts social media use [20] and internet addiction [21]. Individuals with high Neuroticism may have much anxiety about relationships, and social media can be used to interact with other people frequently. Several studies have shown that individuals with high Neuroticism are more likely to report that they use social media excessively and do not have many friends or followers on social media [22]. Neuroticism is also associated with high Instagram usage, which leads to more phubbing (insulting individuals when others check their smartphones in real-life conversations [23]. The unstable nature of Neuroticism can cause individuals to become more irritable and have negative attitudes towards life [24]. This can put them at higher risk because they experience problematic real-world social relationships and avoid real-life interactions through excessive use of social media. Instagram is

perfect for those who spend too much time viewing other people's photos or videos [25]. Instagram appeals to high FOMO individuals by uploading photos, videos, and comments, which can quickly turn into excessive and compulsive use. Those who actively use social media and have a neurotic personality also often experience cyberbullying.

Cyberbullying through social media is one thing that intimidates individuals to communicate hate speech against individuals or groups. Cyberbullying has existed since the comments column on social media because it is open and free to upload as needed. Content and behavior that is not by social norms can impact social media use, making it easy to cyberbully anyone. The anti-bullying donation agency, Ditch The Label, ranks Instagram as the most widely used social media for cyberbullying [26][27][28]. In a survey of 10,020 respondents from the UK between 12 and 20, 42% admitted to being victims of Instagram cyberbullying [26][27][28]. Cyberbullying is posting that contains intimidation, including negative comments and spreading someone's post or profile to make fun of them. The factors behind cyberbullying on social media are appearance (61%), achievement (25%), race (17%), sexual orientation (15%), finance (15%), religion (11%) and others (20%) [26]. Azanella [26] also explains the impact of cyberbullying, namely the abuse of alcoholic beverages or drugs, the occurrence of eating disorders, truancy, stopping using social media, self-harm, deleting social media profiles, thinking about ending life, depression and experiencing social anxiety. The Child Protection survey [29] also revealed that 71% of cyberbullying often occurs on social media; the rest is chat (19%), online games (15%), Youtube (1%) and others (4%). Of this 97%, 34% did not receive services or assistance when they were victims, and 36% did not know about cyberbullying help centers. In addition, Indonesia also ranks 29th for impoliteness in cyberspace [29]. Teenagers are the main subject of the spread of cyberbullying cases. This can be seen in the high number of adolescents who experience violence. Several cases that have occurred show that the victim can be the perpetrator at the same time.

Research by Gezgin & Mihci [30] proves that Instagram has become a popular social media application mainly based on sharing visual content. As a popular social media app, it is considered a significant part of smartphone overuse cases due to the need for its users to check notifications frequently. Therefore, using Instagram to share personally generated content and view other people's updates is considered a smartphone

addiction factor. The most common reasons for frequent use of smartphones are connecting and spending time on social networking services.

Research by C. Longobardi, M. Settani, and M.A. Fabris [31] proves that the increasing popularity of Instagram, followed by active users and a large number of followers, comments, and likes, will increase the risk of addiction. This will hurt their mental health, making them feel anxious and afraid, and comparing themselves to others.

According to Lempa [32], Instagram makes its users addicted because:

1. Instagram combines all applications, such as Facebook, Youtube, and TikTok, making this application very user-friendly.
2. People browse information, check the lifestyle of their friends, influencers, and artists, and get news from every post on Instagram.
3. People seek online friends because of personal interests; they are less interactive in real life, such as introverts and several other reasons.

What was delivered by Lempa [32] was also supported by Adhi [33], which was delivered through Bernie Endyarni Medise from the Indonesian Pediatrician Association (IDAI). Bernie believes that children and adolescents imitate what is considered new and challenging. Bernie revealed that social media is believed to hurt children and adolescents. Social media can also cause mental and social behavioral problems, depression, cyberbullying, sleep disturbances, nightmares, and even suicide.

The data, descriptions, and previous studies above prove that social media has become an essential part of our lives. They spend hours browsing Instagram. Once inside the smartphone screen, we tend to forget life in the real world. Most individuals feel inferior and need social approval to feel good about themselves. Social capital has become very important in today's world. Individuals judge or value themselves by the number of likes and comments they get. We are obsessed with being accepted, and social media can help us.

Previous research has measured the correlation between social media use and the Big Five Personality Traits. However, no research investigates the correlation between social media use and Neuroticism. The high correlation between Instagram use and anxiety has sparked researchers' interest in investigating Instagram use with Neuroticism. Therefore, this study aims to determine the correlation between the use of Instagram and Neuroticism through excessive use of Instagram and can provide important information related to Instagram usage addiction to Instagram

users. This research also focuses on productive age because they are the most vulnerable to cases of Instagram addiction. Many people complain that it is difficult to finish when using Instagram, and even their way to end it is by doing useless things. This study is critical because the available data shows that most Indonesians spend 8 hours 36 minutes daily on the internet and 3 hours 17 minutes on media. The reason Instagram, productive age, and Java Island were chosen for this research is that according to the data, the average use of Instagram is 16 hours per month. Instagram is currently the second most used social media platform in Indonesia. The productive age was chosen because Indonesia is still in the demographic bonus period for the next few years. The 2020 Indonesian population census released by the Badan Pusat Statistik [34] shows that 70.72% or 191,085,440 people are of productive age (15 to 64 years). Moreover, Java Island was chosen because 56.10% of the total population of Indonesia or 151.59 million people, is concentrated in Java Island.

2. LITERATURE REVIEW

2.1. Social Media Addiction

Social media addiction is a mental illness characterized by excessive or uncontrolled concentration in accessing social media, which causes disturbance or pain [35]. Young [36] believes that social media addiction is a disorder characterized by spending more time and less control over use. According to Young [35], this may occur because some individuals become dependent on the feelings they like and the experiences they have when using social media, making it difficult to control themselves and quit. Young's [35] opinion is supported by the statement of M. D. Griffiths & Szabo [37] that excessive use of social media can be classified as internet addiction. Not only that, but this view is also supported by the statement of Hou [38] that social media addiction is considered a form of internet addiction in which individuals show a desire to use social media excessively. Price [39] proves that social media addiction is described as a condition in which individuals feel impulsive or exhibit excessive and uncontrolled use of the internet and other activities involving smartphones, which then causes them to be under new pressures and problems.

One effort to understand social media addiction is through the view that social media addiction is a very multidimensional view. External factors such as socioeconomic status, family roles and functions,

and social media and online games on smartphones influence internet addiction [40]. Meanwhile, personality and self-esteem are internal factors associated with social media addiction [41].

Self-esteem is an individual's evaluation of his values, abilities, and desires [42]. Self-esteem is a prominent factor more strongly associated with social media addiction than other internal factors. Individuals with negative or low self-esteem tend to feel lonely. This situation can occur in individuals with poor social skills. It can be an obstacle to developing their social relationships and social support [43], thus making them feel lonely and more enthusiastic about using the internet [44]. For individuals with negative self-esteem, social media is seen as a place to get social support and help reduce their discomfort in daily life [45].

2.2. Instagram

According to Rizaty [46], Instagram is one of the most popular social media platforms worldwide, especially among teenagers. Instagram is a photo and video-sharing social networking service founded by Kevin Systrom and Mike Krieger. Instagram allows users to upload photos or videos that can be edited with or without filters and organized using hashtags and geotags. Users can browse other people's content and view popular content through hashtags and geotags. Users can add captions to caption photos, hashtags (#) to group photos and videos by category, thus helping users find photos and videos, at (@) to tag or mention other users, and locations to mark the location of these photos and videos were taken. Users can do all this before uploading photos and videos on Instagram. Like other social media networks, Instagram can also interact with other users by commenting, liking, tagging, sharing, and sending private messages. Even Instagram can save photos and videos that users can view again.

Instagram users worldwide from Q1 2020 to Q1 2022 continued to experience a significant increase. Even from Q1 of 2020 to Q1 of 2022, there was an increase of 227 million people [47]. It can be concluded that Instagram is a popular social media application with many users. In Q1 2022 alone, it was 1.961 billion people. Moreover, that number will undoubtedly continue to grow from year to year as the times develop.

2.3. Productive Age

According to Badan Pusat Statistik [34], the productive age is the population aged 15 to 64 years.

People of this age are considered capable of producing goods, services, and income. The productive age population is considered to be participating in ongoing employment activities. From 1971 to 2020, the productive age population increased yearly. In 2021, Indonesia's productive age population will dominate 70.72% [34].

2.4. Information Quality

Information Quality is the desired characteristic of the information system output [48]. Indicators of Information Quality are accurate, complete, relevant, and timely. Accurate means that the information produced must be free from error and not biased or misleading because it plays a vital role in user decision-making. Complete means that the information system must be comprehensive. Users need complete information when decision-making. Complete information includes all the information users need to use the information system. Relevance means if the quality of the information in an information system is related to the needs of its users. Moreover, on time means that information must arrive at the recipient; it should not be late because it is the basis for decision-making. These indicators are identified as critical measures of information quality. Information Quality in the context of social media is different from Information Quality in the context of evaluating information systems [49]. Information Quality is the extent to which information is suitable for the user's intended use [50][51]. Information quality is an essential variable for the success of the information system model and is defined as the suitability of information characteristics for information users [52]. Given this definition, information quality refers to users' subjective assessments of whether information's characteristics meet their needs and intended use. Therefore, the first hypotheses of this research are stated as follows:

H1: Information Quality affects Use.

H1a: Information Quality affects Use which is moderated by Lifestyle.

2.5. System Quality

Desired characteristics of information systems [48]. System Quality indicators are flexibility, system reliability, speed of access, and ease of use. Flexibility means the ability of information systems to change according to user needs (valuable and necessary). If the system can flexibly meet user needs, users will feel more satisfied using the

information system. System reliability means the information system is feasible. The reliability of the information system can also be seen from the information system that serves the user's needs, and there are no problems that interfere with the user's comfort in using the information system. Access speed means the system is designed to provide fast service to users. Access speed will increase user satisfaction in using information systems. Moreover, easy to use and designed to meet user satisfaction through the ease of using the information system. Therefore, the second hypotheses of this research are stated as follows:

H2: System Quality affects Use.

H2a: System Quality affects Use which is moderated by Lifestyle.

2.6. Perceived Ease of Use

The level of user confidence that the system can be used easily can be understood. It can be learned on its own or in other terms; namely, the extent to which individuals believe using an information system will be free from effort [53]. Davis [54] research results show that perceived ease of use can explain why users use the system and that users can accept the new system. This perception is measured through indicators [54][55], which are flexible, easy to use, easy to understand, and easy to learn. Flexible means an information system designed to be flexible for use by users. Easy to use means that the information system is easy for users. Understandable means that the designed information system is easy to understand by users. Moreover, easy to learn means that the designed information system is easy to learn by users. [56] reported a positive impact on intentions with perceived ease of use. Furthermore, [57] documented the positive relationship between use of social media. Therefore, this study argues that perceived ease of use is crucial when investigating users' intentions to use social media. Therefore, the third hypothesis of this study is stated as follows:

H3: Perceived Ease of Use affects Use.

H3a: Perceived Ease of Use affects Use which is moderated by Lifestyle.

2.7. Performance Expectancy

Performance Expectancy is the extent to which individuals using information systems will help to achieve benefits in specific jobs or activities [53]. According to [58], Performance Expectancy is the extent to which using technology will benefit consumers and lead to performance gains. The

results [59] prove that Performance Expectancy plays an essential role in influencing the behavioral intention of teachers to use digital learning applications because it facilitates teacher work assignments and maximizes the educational effect. [60] proves that Performance Expectancy is the most vital determinant of behavioral intention to use mobile applications. So, if users find value and innovation in social media, they are more willing to buy and pursue the use of social media. Performance Expectancy indicators are expected results, job suitability, perceived benefits, and extrinsic motivation [61][62][63]. Expected results mean information systems designed to increase user productivity. Job suitability means that information systems are designed to assist users in completing work faster. Perceived benefit means that the designed information system provides positive benefits to users. Moreover, extrinsic motivation means a system designed to help and support the work or life of the user. Therefore, the fourth hypothesis of this study is stated as follows:

H4: Performance Expectancy affects Use.

H4a: Performance Expectancy affects Use moderated by Lifestyle.

2.8.Habit

Habit is the extent to which individuals tend to perform behavior automatically because they learn from experience [62][64]. Alternatively, in other words, it is the automation of individual behavior in order to use the technology. This requires an initial strategy that helps users understand the use of the technology. When the learning process is successful, users feel that this technology is easy to use. This perception then encourages repeated use. The more people use technology, the more they can use it continuously. Indicators of habit are addiction, necessity, and routine [62]. Addiction means the designed information system requires users to continue to use existing features. Compulsory means the user must continue to use the information system. Moreover, routines mean users are constantly opening the information system. Therefore, the fifth hypothesis of this study is stated as follows:

H5: Habit affects Use.

H5a: Habit affects Use moderated by Lifestyle.

2.9.Lifestyle

According to Kotler & Keller [65], lifestyle is an individual's Lifestyle in the world which is reflected in activities, interests, and opinions. Lifestyle

captures the interaction of the individual as a whole with his environment. Human interests are influenced by their lifestyle. Lifestyle, in principle, is an individual pattern in managing time and money. Lifestyle influences individual behavior, which ultimately determines individual consumption patterns. Nurfarika [66] states that Lifestyle is a personal factor that determines individual behavior in consuming products. According to J. Setiadi & Garawiyani [67], Lifestyle is defined as how individuals spend their time (activities), what they consider important in their environment (interests), and what they think about themselves and the world around them (opinion). Individual Lifestyles will be different from other individuals. Even from time to time, the Lifestyle of individuals and community groups will move very dynamically. Indicators that affect Lifestyle include activities, interests, and opinions [65][67]. Activity means identifying what users do, what they buy, and how they spend their time. Interest means the user's factors influencing the decision-making process. Moreover, opinion means the opinion of each user, which comes from their own personal.

2.10. Use

Use refers to how often users use or utilize the capabilities of information systems [48]. Indicators of Use are frequency, intention to use, and daily use. Frequency of use means how often users use the information system. The intention of use means measuring the extent to which users use the information system. Moreover, daily use means everyday users use information systems. Therefore, the sixth hypothesis of this study is stated as follows:

H6: Use affects Neuroticism.

2.11. Neuroticism

Individuals with high Neuroticism tend to be easily anxious, depressed, afraid, impulsive, emotional, nervous, low self-esteem, worried, self-pity, irritable, uncertain, pessimism, tense, lonely, and easily stressed [68]. Individuals with high Neuroticism will feel anxiety and tension, so they are afraid to make mistakes [16]. Neuroticism is related to two primary emotions, namely anger and fear. Indicators of Neuroticism are easily anxious, depressed, irritable, and afraid. Easily anxious means users feel anxious. Easily depressed means the user feels depressed. Irritable means the user feels offended. Moreover, fear means the user is afraid.

2.12. Related Research

Research by Bowden-Green [22] using the Big Five Personality Traits theory and DeLone and McLean proves that the negative impact of excessive use of social media is depression and anxiety. It is associated with the personality traits of neuroticism. Then research by Rozgonjuk [69] using the Big Five Personality Traits and Lifestyle theory proves that young age has a higher FOMO score and FOMO affects Neuroticism. Furthermore, research by Rahmawati & Narsa [70] using the Technology Acceptance Model (TAM) theory proves that Perceived Usefulness and Perceived Ease of Use affect the use of e-Learning. Research by Fakhiri & Fadhilah [71] using the DeLone and McLean theory proves that System Quality and Service Quality affect user satisfaction in using the WhatsApp application. Then research by Sensuse [72] using the theory of DeLone and McLean also proves that Information Quality, Service Quality, and Use affect the use of the Elisa chatbot. Furthermore, research by Abbasi & Drouin [73] using the Big Five Personality Traits theory and DeLone and McLean proves that those with a solid neurotic personality will use Facebook to improve their mood. Research Dwi Aulia & Sharif [74] using the TAM theory and DeLone and McLean proves that Perceived Usefulness and Perceived Ease of Use affect the use of the WhatsApp application. Then [75], using the Unified Theory of Acceptance and Use of Technology (UTAUT) and DeLone and McLean's theory prove that Performance Expectancy, Effort Expectancy, Facilitating Condition, Voluntariness of Use, Behavioral Intention affect Use. Furthermore, research J. H. Tang [20] using the Big Five Personality Traits theory and DeLone and McLean proves that neuroticism correlates with social media use. Research Marhaeni [76] using the theory of UTAUT2 and DeLone and McLean proves that Performance Expectancy, Social Influence, Facilitating Conditions, Hedonic Motivation, Price Value, and Habit affect the use of instant messages. Moreover, research Andreassen [21] using the theory of Big Five Personality Traits and DeLone and McLean proves that individuals with neurotic personalities have the potential to experience addiction to the use of social media.

3. RESEARCH METHODOLOGY

3.1. Research Model

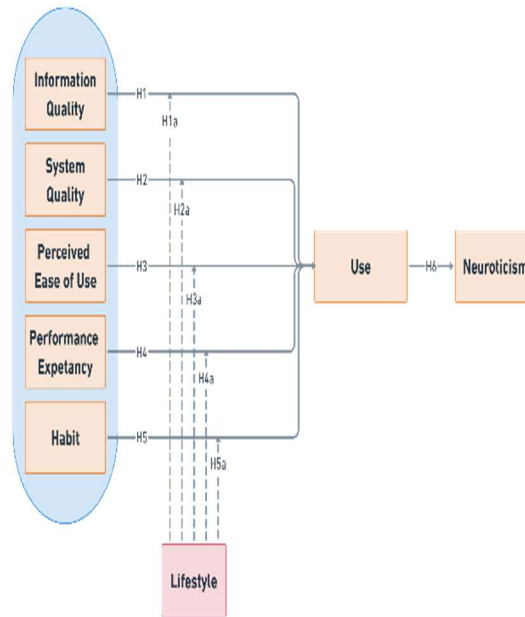


Figure 1: Research Model.

The research model used results from hypothesis testing, which aims to test and explain certain relationships of two or more factors in one condition. This research model aims to prove the relationship between Instagram and Neuroticism.

3.2. Data Gathering

This research was conducted by distributing online questionnaires via Google Form to active users of Instagram social media at productive age in Java. This questionnaire was distributed through social media such as Facebook, Instagram, Twitter, and WhatsApp. This questionnaire has 46 representative questions per factor to be tested using a likert scale. Based on slovin's calculation, the number of respondents needed is 400 people, who are the samples to achieve the objectives of this study.

3.3. Respondents

This study used a sample of provinces located on the island of Java, namely the provinces of Banten, DKI Jakarta, West Java, Central Java, East Java, and D.I.Yogyakarta, taking into account the rules of productive age in the sample. The results show that there are 245 female and 155 male Instagram users, as shown in Figure 2

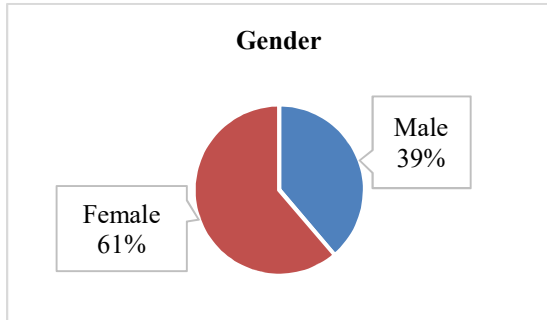


Figure 2: Gender Chart.

The diagram in Figure 3 above is a diagram of the age of the respondents. There are three respondents at the age of 16 years, two respondents at the age of 17 years, three respondents at the age of 18 years, nine respondents at the age of 19 years, 16 respondents at the age of 20 years, 17 respondents at the age of 21 years, thirty-four respondents at the age of 22 years, forty-four respondents at the age of 23 years, fifty-five respondents at the age of 24 years, eighty-six respondents at the age of 25 years, thirty-eight at the age of 26 years, fifteen respondents at the age of 27 years, nineteen respondents at the age of 28 years, thirteen respondents at the age of 29 years, nine respondents at the age of 30 years, two respondents at the age of 31 years, four respondents at the age of 32 years, one respondent at the age of 33 years, two respondents at the age of 34 years, three respondents at the age of 35 years, six respondents at the age of 37 years, two respondents at the age of 38 years, two respondents at the age of 39 years, four respondents at the age of 40 years, two respondents at the age of 42 years, three respondents at the age of 43 years, two respondents at the age of 44 years, one respondent at the age of 45 years, one respondent at the age of 50 years, and two respondents at the age of 55 years.

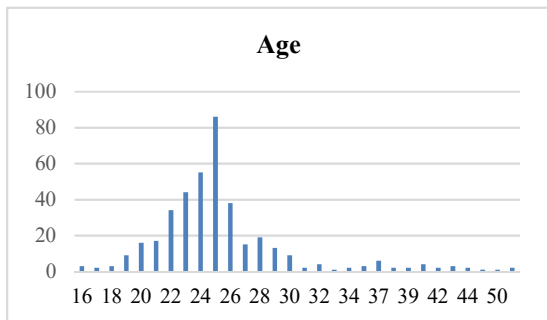


Figure 3: Age Diagram.

In Figure 4, there are forty-four respondents in Banten, one hundred and fourth respondents in DKI Jakarta, forty respondents in West Java, eighty-four respondents in Central Java, twelve respondents in East Java, and one hundred and sixteenth respondents in D.I.Yogyakarta.

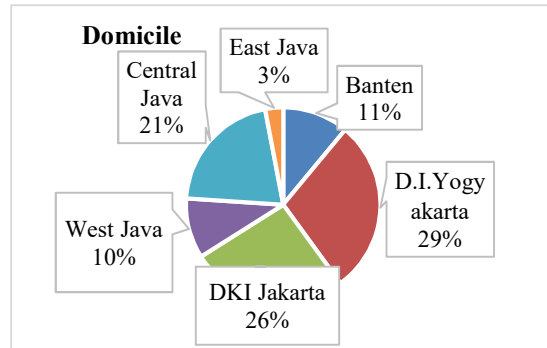


Figure 4: Domicile Chart.

On the job chart, Figure 5, twenty-one respondents work as doctors, eleven respondents work as lecturers/teachers, twenty-three respondents work as entrepreneurs, eleven respondents work as freelancers, six respondents work as housewife, two hundred and twenty-second work as employees, ninety-two respondents work as college students, seven respondents work as students, two respondents work as civil servants, and five respondents are not working.

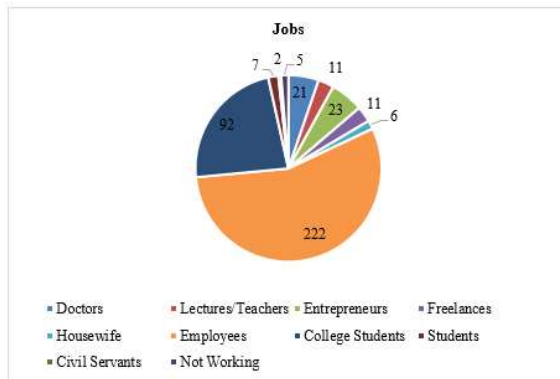


Figure 5: Jobs Chart.

3.4. Validity and Reliability

Table 1: Outer Loading and AVE Analysis Result.

Indicator	Loading Factor	Variable	AVE
IQ2	0,822	Information Quality	0,632
IQ3	0,763		
IQ4	0,799		
SQ1	0,835	System Quality	0,728
SQ2	0,871		

PEU1	0,797	Perceived Ease of Use	0,787
PEU2	0,923		
PEU3	0,917		
PEU4	0,907		
PE1	0,829	Performance Expectancy	0,689
PE2	0,760		
PE4	0,896		
H1	0,807	Habit	0,691
H2	0,874		
H3	0,810		
L1	0,859	Lifestyle	1,000
L3	0,766		
U1	0,910	Use	0,728
U2	0,792		
U3	0,853		
N1	0,776	Neuroticism	0,663
N2	0,873		
N3	0,745		
N4	0,857		

Source: Authors' Analysis

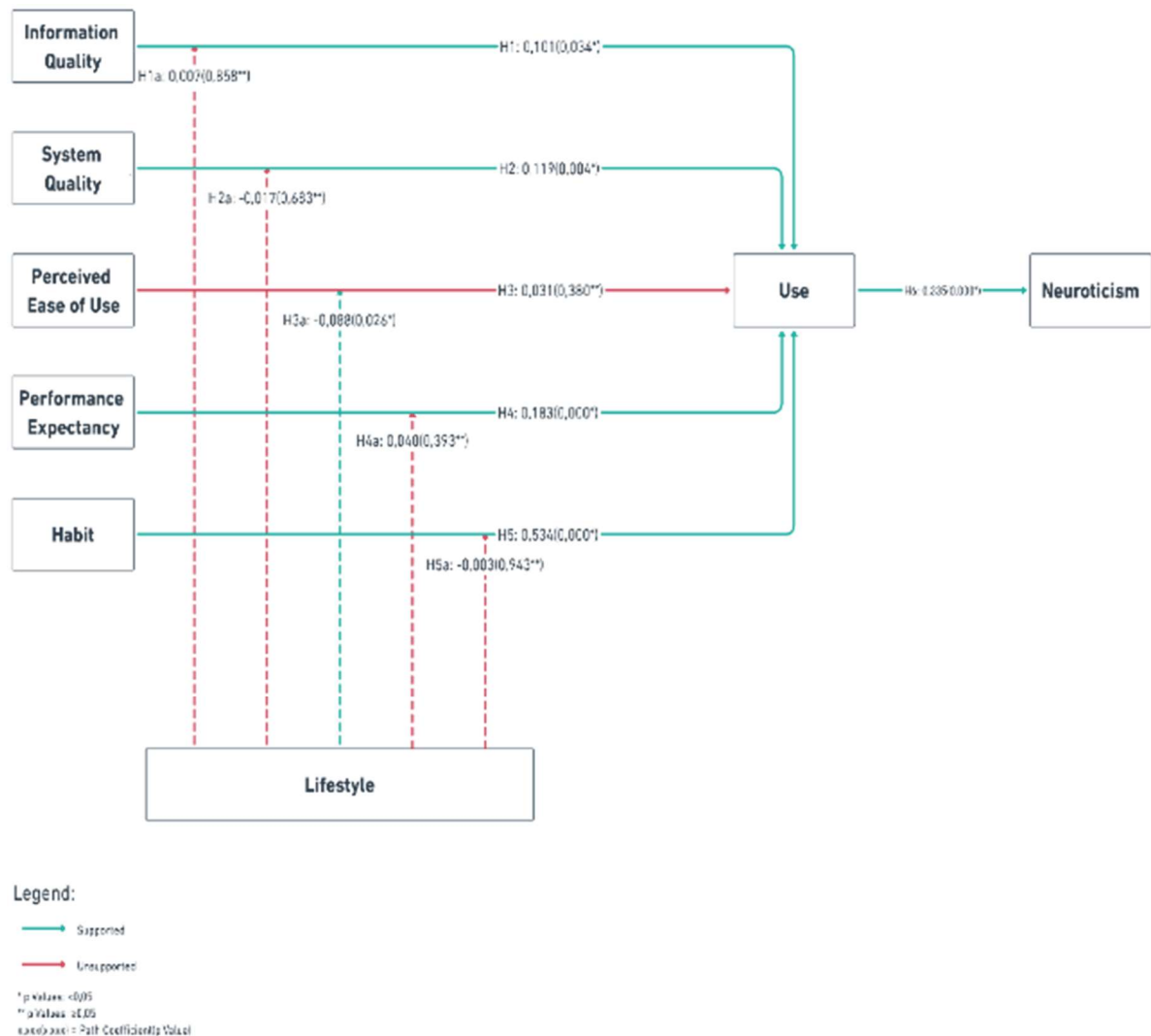


Figure 6: Structural Model Hypothesis

A variable can be said to be valid if the value of the loading factor on the outer loadings is more significant than 0.7 [77] and the Average Variance Extracted (AVE) value is more significant than 0.5 [78]. This research needs to be done in up to 3 iterations to get a loading factor value above 0.7; because in the first iteration, it shows the results of IQ1 (0.209), SQ4 (0.684), PE3 (0.654), and L2 (0.634) have loading factor value of less than 0.7, which indicates that the variable is invalid, so it is removed from the model. After removing four indicators from the first iteration, a second iteration was carried out, which showed the results of SQ3 (0.696) having a loading factor value of less than 0.7, which indicates that the variable is still invalid, so it is removed from the model. Table 1 below shows the third iteration's result after eliminating the invalid SQ3 variables. Table 1 contains data on the value of the loading factor for the third iteration, showing that all variables already have a loading factor value that is more significant than 0.7. This indicates that all of these variables are valid or that the model is said to be good, so it is acceptable for research.

4. RESULT AND DISCUSSION

4.1. Hypothesis Analysis

Based on Figure 6, the Information Quality variable affects the Use variable with a magnitude of 0.101. In contrast, the Information Quality variable moderated by the Lifestyle variable does not affect the Use variable. The System Quality variable affects the Use variable with a magnitude of 0.119, while the System Quality variable moderated by the Lifestyle variable does not affect the Use variable. Then the Perceived Ease of Use variable does not affect the Use variable, but the Perceived Ease of Use variable moderated by the Lifestyle variable influences the Use variable by -0.088. Furthermore, the Performance Expectancy variable affects the Use variable with a magnitude of 0.183, while the Performance Expectancy variable moderated by the Lifestyle variable does not affect the Use variable. Furthermore, the Habit variable affects the Use variable with a magnitude of 0.534, while the Habit variable moderated by the Lifestyle variable does not affect the Use variable. The Use variable also affects the Neuroticism variable, with the magnitude of the effect being 0.335. In this study, it is proven that Lifestyle moderation only affects the Perceived Ease of Use variable.

Table 2: Hypothesis Result.

Variabel	Original Sample	P-Values	Result
Information Quality -> Use	0,101	0,034	Accepted
Information Quality -> Use (Moderate Lifestyle)	0,007	0,858	Not Accepted
System Quality -> Use	0,119	0,004	Accepted
System Quality -> Use (Moderate Lifestyle)	-0,017	0,683	Not Accepted
Perceived Ease of Use -> Use	0,031	0,380	Not Accepted
Perceived Ease of Use -> Use (Moderate Lifestyle)	-0,088	0,026	Accepted
Performance Expectancy -> Use	0,183	0,000	Accepted
Performance Expectancy -> Use (Moderate Lifestyle)	0,040	0,393	Not Accepted
Habit -> Use	0,534	0,000	Accepted
Habit -> Use (Moderate Lifestyle)	-0,003	0,943	Not Accepted
Use -> Neuroticism	0,335	0,000	Accepted

Source: Authors' Analysis

The results of the hypothesis for Information Quality are accepted because the p-value < 0.05 is 0.034, while the Information Quality moderated by Lifestyle is rejected because the p-value is > 0.05 , which is 0.858. Thus H1: Information Quality affects Use (**accepted**) and H1a: Information Quality moderated by Lifestyle affects Use (**rejected**).

The results of the hypothesis for System Quality are accepted because the p-value < 0.05 is 0.004, while the Quality System moderated by Lifestyle is rejected because the p-value is > 0.05 , which is 0.083. Thus H2: System Quality affects Use (**accepted**) and H2a: System Quality moderated by Lifestyle affects Use (**rejected**).

The results of the hypothesis for Perceived Ease of Use were rejected because the p-value was < 0.05 , which was 0.380, while the Perceived Ease of Use moderated by Lifestyle was accepted because the p-

value was >0.05 , which was 0.026. Thus H3: Perceived Ease of Use affects Use (**rejected**) and H3a: Perceived Ease of Use moderated by Lifestyle affects Use (**accepted**).

The results of the hypothesis for Performance Expectancy are declared accepted because the p-value is <0.05 , which is 0.000, while the Performance Expectancy moderated by Lifestyle is rejected because the p-value is >0.05 , which is 0.393. Thus H4: Performance Expectancy affects Use (**accepted**) and H4a: Performance Expectancy moderated by Lifestyle affects Use (**rejected**).

The hypothesis for Habit is accepted because the p-value <0.05 is 0.000, while the Habit moderated by Lifestyle is rejected because the p-value is >0.05 , which is 0.943. Thus H5: Habit affects Use (**accepted**) and H5a: Habit moderated by Lifestyle affects Use (**rejected**).

The results of the hypothesis for Use are accepted because the p-value <0.05 , which is 0.000. Thus H6: Use has an effect on Neuroticism (**accepted**).

4.2. Theoretical Implication

Previous research conducted by Sensuse [72] proved that Information Quality affects Use. In this study, it is also proven that Information Quality affects Use. Nevertheless, on the other hand, the results obtained from the Information Quality test moderated by Lifestyle do not affect Use. There is no previous research on testing conducted in moderation using Lifestyle, so the result is that the Information Quality variable moderated by Lifestyle has no effect.

Then the previous research conducted by Fakhiri & Fadhilah [71]; Fatema [79] proves that System Quality affects Use. In this study, it is also proven that System Quality affects Use. Nevertheless, on the other hand, the results obtained from System Quality testing moderated by Lifestyle do not affect Use. There is no previous research on testing conducted with moderation using Lifestyle, so it is found that the System Quality variable moderated by Lifestyle has no effect.

In addition, research conducted by Aditya & Wardhana [80]; Dwi Aulia & Sharif [74]; Rahmawati & Narsa [70] results obtained where Perceived Ease of Use affects Use. However, in this study, the results of Perceived Ease of Use did not affect Use. This is because of the respondent's confidence that the system can be used easily, understood, and studied alone or with other understandings; namely, the extent to which individuals believe that using an information system

will be free from effort is not found on Instagram. Nevertheless, on the other hand, the results obtained from the Perceived Ease of Use test, which is moderated by Lifestyle affect Use. There is no previous research on Perceived Ease of Use moderated by Lifestyle.

Based on research conducted by Mairesi [75] and Marhaeni [76], the results were that Performance Expectancy affects Use. In this study, it is also proven that Performance Expectancy affects Use. Nevertheless, on the other hand, the results obtained from the Performance Expectancy test moderated by Lifestyle do not affect Use. There is no previous research on testing conducted with moderation using Lifestyle, so the result is that the Performance Expectancy variable moderated by Lifestyle has no effect.

The Habit variable is also considered influential, where this result is the same as the previous research conducted by Marhaeni [76]. In this study, the results showed that the Habit variable affected Use. Nevertheless, on the other hand, the results obtained from Habit testing moderated by Lifestyle do not affect Use. There is no previous research on testing conducted with moderation using Lifestyle, so the results show that the Habit variable moderated by Lifestyle has no effect.

Research conducted Bowden-Green [22], Rozgonjuk [69], Abbasi & Drouin [73], J. H. Tang [20], Andreassen [21], Seidman [81], Amichai-Hamburger [82] Hardie & Tee [83] proves that Use affects Neuroticism. In this study, Use has an essential role in Neuroticism, and also the results obtained show that Use affects Neuroticism. The emergence of individualism, hedonism, forgetting time, forgetting responsibility, insecurity about the achievements of others, becoming mentally unhealthy, FOMO etc., is one form of Neuroticism.

4.3. Practical Implication

The results obtained indicate that Information Quality influences Use, so the entire Instagram team must be able to provide quality information to its users by presenting information or content that is accurate, complete, relevant, and timely.

Another factor to consider in using Instagram is System Quality. The entire Instagram team must be able to provide quality systems to its users with high standards so that, if accepted, it will make users feel satisfied with the services (flexibility, system reliability, speed of access, and ease of use) provided.

Perceived Ease of Use is considered not to affect Use in this study. This means the entire Instagram

team has to think about how to present the look, functions, and Instagram features that are easy to use and understand.

Performance Expectancy influences Use. The entire Instagram team must help its users achieve benefits in specific jobs or activities by meeting the expectations of users' results, the suitability of their activities or work, the benefits they feel, and extrinsic motivation for users.

Based on the results obtained, the most significant factor that makes individuals use Instagram is Habit. With these results, the Instagram team must know how to automate individual behavior to use Instagram and must also think about solutions to how often individuals currently use Instagram.

No previous research has discussed the correlation between Instagram usage and Neuroticism. However, the results of this study prove that the rapid development of social media, such as Instagram, provides an opportunity for anyone to experience it anytime and anywhere. The findings of this study provide a solution to Instagram addiction. When examined more deeply, why does someone experience Instagram addiction because of the need for recognition, social needs, and entertainment needs. These three points play an essential role in Instagram addiction. The factors contributing to Instagram addiction can be utilized by policymakers and parents to help overcome and prevent these challenges. Unlike other social media, visuals on Instagram speak louder than words. Visuals on Instagram show how effective communication is between people. Thus, the features provided on Instagram by changing existing opportunities into educational and learning media. The need to inform about the negative impact and correct use of Instagram. A critical role of parents and educators in achieving this goal. This can be a significant factor in reducing addiction to using Instagram.

5. CONCLUSIONS

The rapid development of social media makes it easier for us to socialize virtually and get information and entertainment. Many people use it and cannot even live without it. So it becomes essential for educators, parents and stakeholders to make solutions or research social media addiction. The phenomenon of social media addiction is, of course, inseparable from the psychological factors that influence it. While Instagram can generate satisfaction for its users, its use can also lead to

negative consequences such as addiction. This study seeks to determine the psychological factors that influence addiction to use Instagram. Addicted use of Instagram can cause users to lose control over their use of Instagram. Therefore this study aims to determine the correlation between Instagram usage and Neuroticism through excessive use of Instagram and can provide important information related to Instagram usage addiction to Instagram users.

Based on the results of the research that has been done, it is known that Information Quality, System Quality, Performance Expectancy, and Habit affect Use, while Perceived Ease of Use does not affect Use. The Perceived Ease of Use factor moderated by Lifestyle affects Use. In contrast, Information Quality, System Quality, Performance Expectancy, and Habit moderated by Lifestyle do not affect Use. Furthermore, Use influences Neuroticism.

Another thing that underlies the addiction of people of productive age in Java Island is that when they are together with their friends, they prefer to use Instagram rather than enjoy time together, such as chatting or telling stories. In addition, when you feel bored using Instagram, you do other unproductive activities, such as playing games, watching movies, going out with friends, and opening other social media. They feel they have forgotten the time and are surprised at the time spent after using Instagram, so they often stay up all night to find everything on Instagram. They are trapped by a snare that they have set themselves, so they complain that it is difficult to end, and as a result, they become addicted to Instagram.

This research has a significant impact not only on addicted Instagram users but also on anyone who is already addicted to social media. Precautions must be taken immediately, realizing the negative consequences of excessive use of Instagram and the role of addiction to Instagram use in everyday life. Steps to reduce the use of Instagram should not be taken only when the user has experienced addiction, considering the negative consequences are significant. Ideally, implementing a prevention strategy is essential. Taking advantage of the features available on Instagram can be used as an opportunity as a learning medium for educators and parents so that they can help them get out of the trap of Instagram addiction.

The limitations of the study and future research: This research has some specific limitations and implications for future research. First, a small sample of only 400 participants and most of them are female. Thus the results cannot be generalized

to the broader population. Future research should have the same number of female participants as male participants and involve more participants. Second, the sample is representative of only some productive ages. Therefore, future research should involve more productive age participants. Third, this research was only conducted on Java Island. Therefore, future research should involve more participants outside Java. Finally, it is necessary to add variables such as sleep quality to understand how good or bad the sleep quality of Instagram addicts is.

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