

The Influence of Instagram Usage Motives towards Loneliness Among Undergraduate Students in the Jabodetabek Area

Pengaruh Motif Penggunaan Instagram terhadap *Loneliness* Mahasiswa di Wilayah Jabodetabek

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Abstract :

Many emerging adults in Indonesia, especially those in Jabodetabek, often experience feelings of loneliness, which distorts cognition and social behavior. This study investigates the influence of Instagram usage motives on loneliness among undergraduate students in the Jabodetabek area. 112 students participated in this study, and a correlation matrix analysis and linear regression were used to analyze the data. The instruments used were the Instagram Motives Questionnaire (IMQ) and the UCLA Loneliness Scale version 3 (ULS-3). This quantitative cross-sectional study found a significant negative correlation between social impact-seeking Instagram usage motive and loneliness ($\rho = -0.203, p = 0.031$). The results of the linear regression analysis found that only the social impact seeking dimension had an influence of 7.1% on loneliness. This fact indicates that the motive of seeking social impact on Instagram is associated with lower subjective feelings of loneliness during the emerging adulthood period. In contrast, other dimensions of Instagram usage motives did not show a significant influence on loneliness. Results support promising potential for further research into the relationship behind Instagram use motives and loneliness outcomes as a basis for future interventions.

Keywords:

Instagram, motives, loneliness, university students

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1. Introduction

As many as 7.8% of adolescents in ASEAN countries, including Indonesia, often reported or always feeling lonely, while 31.3% of adolescents reported sometimes feeling lonely in the past twelve months (Pangestika et al., 2024). Research on loneliness in Indonesia is still lacking compared to other developing countries (Peltzer & Pengpid, 2019). The Jabodetabek area (Jakarta, Bogor, Depok, Tangerang, and Bekasi) is a global city with rapid economic growth (World Population Review, 2024). This area also functions as a melting pot of economy, politics, and culture (Lai, 2024). Because Jakarta functions as the center of government and the economy, the people of Jakarta experience relatively strong psychological and social pressure. This social pressure can be seen in students who feel failures and/or isolated from their surroundings when they are unable to meet social standards in the Jabodetabek area, which are certainly higher than other areas (Dwi et al., 2024). This condition can increase feelings of anxiety and loneliness as well as hinder their adaptation to the environment (Lan et al., 2023)

According to Beck (2017), loneliness is a feeling where a person's relationships do not meet their psychosocial needs and expectations. According to Guarnera et al. (2023), loneliness refers to an emotional and social state where there is a gap between the quality or quantity of ideal and actual social relationships. Based on definitions from various experts regarding loneliness, we conclude that loneliness is an emotional and social state where a person's interpersonal relationships do not meet psychosocial needs and expectations in terms of quantity or quality. The operationalization of

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loneliness in this study is in accordance with Russell (1996), who stated that loneliness can be measured as a unidimensional concept.

A lot of studies in the past have been done on the various factors that influence loneliness. Cahyani and Afifah (2023) have identified social support and pet attachment as variables with negative correlations with loneliness. Solmi et al. (2020) meta-analysis found that age (U-shaped relationship), the female gender, quality of social contacts, low competence, socio-economic status (SES), and chronic medical conditions are also correlated with loneliness. And finally, Zuo et al. (2022) meta-analysis found several major factors impacting loneliness, with those influencing factors being age, education level, marital status, living arrangement, having no children, receiving family support, relationship with family members, being with or without chronic diseases, health status, activities of daily living, social support, social activities, financial status, satisfaction with housing conditions, and decision-making rights for major household expenditures.

Although loneliness can be an adaptive drive that serves a function towards the renewal of relationships necessary for human survival and development, loneliness also has many negative impacts (Cacioppo & Patrick, 2008). Previous studies have clearly stated that many negative impacts can arise due to loneliness, especially if the loneliness is chronic (Şimşek & Zincir, 2024; Guarnera et al., 2023; Hafiz, 2017). Some of the negative impacts that can arise are psychological distress, increased alexithymic traits, decreased academic performance and participation, increased neuroticism and unpleasant emotions such as anger, anxiety, sadness, depression, and worthlessness, as well as a decrease in overall health and increased risk of dementia. (Abdia & Maryam, 2024; Bek, 2017; Defender, 2017; Conti et al., 2023)

The theory of loneliness from Cacioppo and Patrick (2008), also known as the evolutionary theory of loneliness, is one of the dominant theories that explains loneliness from a psychological and evolutionary perspective. Cacioppo & Patrick (2008) see loneliness as an adaptive function that encourages a person to avoid the dangers of isolation because since hundreds of years ago it was very important for humans to join a group so that they could survive and find food in their hunting grounds. In modern times, the negative impacts of loneliness have outweighed its adaptive function due to changes in human lifestyle, where people are more likely to be isolated. Cacioppo & Patrick (2008) equate loneliness, which they also call social pain, with physical pain in terms of function and physiological impact. According to Cacioppo & Patrick (2008), this social pain manifests in the body as a stress reaction that affects cognition and social behavior in a way that causes people who experience long-term loneliness to be more likely to experience excessive isolation.

According to Cacioppo & Patrick (2008), three complex factors influence the negative impacts of loneliness. The first factor is an innate and biologically rooted vulnerability towards feelings of social disconnection. The second factor is a person's ability to self-regulate emotions that come with social isolation. The final factor is our expectations and perception of our relationships. This speaks to how we interpret social stimuli as well as what emotions they trigger, which will ultimately decide whether certain situations will trigger loneliness.

User & Gratification Theory explains that the most important role of media is to fulfill individual needs and motivations (Mehrad & Tajer, 2016). The needs or motivations that are mostly sought by individuals in using media, such as information, education, social interaction, and entertainment (Whiting & Williams, 2013). It is important to note that everyone has their own needs and motivations when using social media. When viewed through the lens of Cacioppo & Patrick's (2008), someone who experiences loneliness will also experience distortions of cognition and social behavior. Because of these changes in cognition and behavior, a person's needs and motivations when using social media, including Instagram, will be different compared to people who do not experience loneliness.

Instagram is one of the most frequently used social media platforms in Indonesia. Data published by NapoleonCat (2024) states that Instagram users in Indonesia reached 90.183.200 as of August 2024, representing 31.9% of the total population. In 2021, the largest Instagram user group in Indonesia was aged 18 to 24 years, accounting for 36.4% of users. This large and diverse user base indicates the presence of varied motives for using Instagram. According to Saletti et al. (2023), Instagram usage motives consist of six dimensions: Social Impact Seeking (motivation to promote oneself, show skills and creativity, and inspire others through Instagram content), Emotional Escape

(using Instagram to relieve stress, boredom, anxiety, or as a way to fill free time with interesting things), Souvenir Keeping (using Instagram as a place or tool to store valuable). In August 2024, Instagram had reached 90,183,200 users in Indonesia, which makes up 31.9% of the total population, and in 2021, the 18-24 age group became the largest Instagram users in Indonesia (36.4%). However, behind this data, unfortunately, many negative impacts of Instagram use on the mental health of its users were found. A relationship was found between intensive use of social networking sites (SNS), including Instagram, with lower life satisfaction and worse mental health according to Orben et al. (2019)

Aalbers et al. (in Saletti et al., 2023) warned us not to just focus on this relationship but also to look at other factors that play a role in the dynamics of Instagram use. Some early studies have investigated various motives that people may have for their Instagram use. Prihatiningsih's (2017) research shows that Instagram is used by its users to fulfill various positive needs, such as information needs (looking for news and current news). There is also research revealing that currently the motive for using Instagram is often used to follow events occurring in the surrounding environment, communicate, and seek entertainment for personal satisfaction (Aji & Dwihantoro, 2024).

An experimental study from the University of Pennsylvania showed that limiting social media use, including Instagram use, to 30 minutes per day can significantly reduce feelings of loneliness and depression. The study showed that more intensive social media use was associated with higher levels of loneliness, especially for individuals who used social media to maintain social connections (Lup et al., 2015). Bonsaksen et al. (2023) found that the more time spent on social media, the higher the level of loneliness felt by users. This finding was particularly significant for individuals who used social media to maintain social relationships. This suggests that the motivation behind social media use plays an important role in determining its impact on users' psychological well-being, including feelings of loneliness. In our study, we want to see the influences of Instagram usage on loneliness levels among university students in Jabodetabek.

2. Methods

Research Subject

This study involved 112 early adult participants spread across Daerah Khusus Jakarta, Bogor, Depok, Tangerang, and Bekasi as a sample of the existing population. The sampling method was purposive sampling, namely the selection of participants with certain characteristics according to the research focus determined by the researcher (Lenaini, 2021).

Research Design

This study applies a quantitative method with a cross-sectional design, which involves collecting scores from various individuals at a certain time, showing data among a certain population at a single point in time (Zuleika & Legiran, 2022). This study adopts a correlational research strategy to investigate the relationship between different motives for Instagram use and loneliness in undergraduate students in early adulthood, with the correlation matrix analysis method and linear regression statistical analysis (Gusev et al., 2024).

Research Instrument

The research instrument used is the Instagram Motives Questionnaire (IMQ) (Saletti et al., 2023). IMQ aims to measure different motives behind the use of Instagram. This instrument consists of 32 items chosen and categorized through exploratory factor analysis. Each item was assessed using a 5-point Likert Scale (from "does not describe me" to "describes me extremely well"). The IMQ data results were divided into six main motive scores consisting of social impact seeking, social impact seeking, emotional escape, souvenir keeping, social connection, attention seeking, and information seeking. Based on research conducted by Saletti and colleagues (2023), the results of reliability testing of each dimension in the IMQ instrument using the Omega Reliability Coefficient (Ω), as an alternative to Cronbach α , were 0.93 (*Social Impact Seeking*), 0.84 (*Emotional Escape*), 0.89 (*Souvenir Keeping*), 0.84 (*Social Connection*), 0.87 (*Attention Seeking*), and 0.79 (*Information Seeking*). These results indicate that the Omega reliability coefficient (i.e., the internal consistency of this scale) is adequate. It can be seen that the Social Impact Seeking dimension has

very high reliability, while The Information-Seeking dimension has the lowest reliability, but is still sufficient for use in research.

In terms of the instrument's validity, the study tested convergent validity, with Average Variance Extracted (AVE) values for the IMQ instrument ranging from 0.481 to 0.727, as well as Composite Reliability (CR) values ranging from 0.78 to 0.91 — both of which meet the recommended thresholds. Discriminant validity with a comparison of the square root of AVE for each dimension to the interdimensional correlation, which shows that the square root of AVE for each IMQ dimension is greater than the interdimensional correlation of IMQ, so that discriminant validity is achieved.

In addition to the IMQ, we also used the UCLA Loneliness Scale version 3 (ULS-3) instrument developed by Russell (1996). The UCLA Loneliness Scale version 3 was designed to detect and measure a person's long-term feelings of loneliness and is a fairly popular measuring tool in psychological research to investigate an individual's level of loneliness. This scale consists of 20 items, with 11 items being favorable items and 9 items being unfavorable. Respondents rated each item using a 4-point Likert Scale, ranging from "never" to "often". The higher the score obtained, the higher the loneliness experienced by the individual (Nurdiani, 2019).

Research conducted by Arimoto and Tadaka (2019) using the UCLA Loneliness Scale version 3 instrument, which had been adapted into a Japanese version, showed a Cronbach's α reliability result of 0.926, which means it has very good reliability. Convergent validity testing was conducted by looking at the correlation between the total score of the Japanese version of the ULS-3 and various external variables related to loneliness. The results of the loneliness scale score also correlated according to theoretical predictions, such as being negatively related to subjective health ($r = -0.242$, $p < 0.001$) and social support and positively related to anxiety and childcare burden ($r = 0.292$, $p < 0.001$). Thus, the validity of this instrument is also stated to be good, and the ULS-3 is considered to have good cross-cultural validity.

In this study, we used the English version of IMQ and ULS-3. To anticipate difficulties due to the use of English in an Indonesian population, the subjects chosen for this study are selected to have good English skills. As an additional layer of anticipation, we also included subtitles in Indonesian to assist in case a subject finds it difficult to understand some questions. We translated the scale under the supervision of one of the linguists and registered social psychologists at our campus. With this, we have taken preventive measures to reduce errors due to any potential language barriers.

In our research, we conducted reliability and validity tests of the measuring instruments before we conducted data analysis from the results in the field. The results of the internal reliability testing using Cronbach's α show that both ULS-3 and IMQ instruments have good internal reliability. ULS produces a Cronbach α value of 0.891. In the case of IMQ, internal reliability tests are done on each dimension because the dimensions on this instrument aren't added up to form a total score. Among the different dimensions of IMQ, Social Impact Seeking (0.917) has the highest Cronbach α value followed by the Souvenir Keeping (0.874) and Attention Seeking (0.875), then Emotional Escape (0.782), Social Connection (0.777), and Information Seeking (0.692), which also show good reliability. Based on the item-rest correlation test, all items in the IMQ and ULS-3 instruments have good item-rest correlation values except for ULS-3 item number 17 (0.151). Therefore, we decided to eliminate the item in this study. This is done to maintain the validity and reliability of the instruments used in the study.

Data Analysis Techniques

At the beginning of data analysis, we will conduct a reliability and validity test of the measuring instrument, then we will continue with the normality and linearity assumption test. After that, we conducted a correlation analysis to investigate the relationship between the motives for using Instagram and loneliness. At the end, this study uses an analysis technique in the form of linear regression analysis to see the influence of the independent variable on the values of the dependent variable (Y). This analysis process will later use JASP (Jeffreys' Amazing Statistics Program) software to assist in the interpretation and analysis of research data. We ensure that the participant understands the information and has the opportunity to ask questions before being asked to provide consent. All information relating to the research results of each research subject will be kept confidential and will only be known to the researcher.

3. Results

Based on the results of data collection and processing, the following is the set of data obtained through data analysis.

Table 1. Demographic Data

Demographics	<i>n</i>	(%)
Men	34	30
Women	79	70
Tangerang	76	67
Jakarta	20	18
Bekasi	14	12
Depok	2	2
Bogor	1	1
Using Instagram 1-3 hours/day	65	58
Using Instagram 4-6 hours/day	36	32
Using Instagram 7-9 hours/day	6	5
Using Instagram 10-12 hours/day	0	0
Using Instagram >12 hours/day	1	1
Didn't reveal how long they use Instagram every day	5	4

The table above shows the demographic data of each participant involved in this study. A total of 113 participants who are actively studying at the undergraduate level (S1) have participated, with men constituting 30% and women 70% of our sample. The majority of participants in this study came from Tangerang (67%), followed by Jakarta (18%), Bekasi (12%), Depok (2%), and Bogor (1%). In terms of Instagram usage, as many as 65 people (58%) use it, for 1-3 hours every day, 36 people (32%) for 4-6 hours every day, 6 people (5%) for 7-9 hours every day, none for 10–12 hours every day, and 1 (1%) for more than 12 hours, all the while 5 people (4%) did not reveal the duration of their use. Based on the classification of duration of use in the study by Abdia and Maryam (2024), 58% of participants in this study were Instagram users of the low duration intensity group, and 42% of participants were Instagram users of the high duration intensity group.

Table 2. Descriptive Statistics

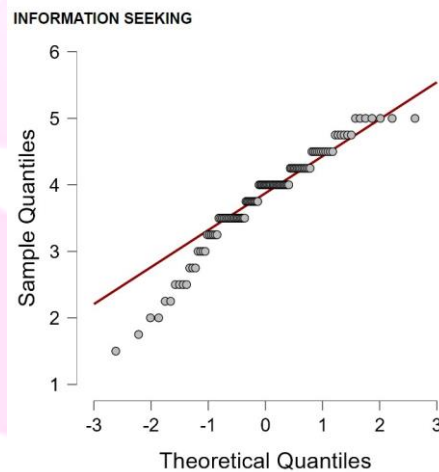
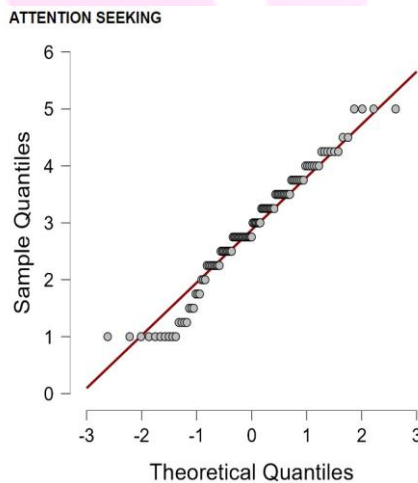
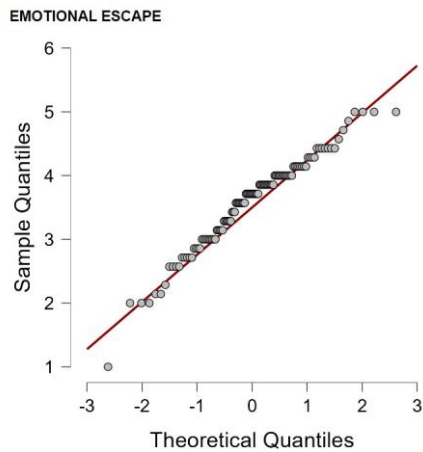
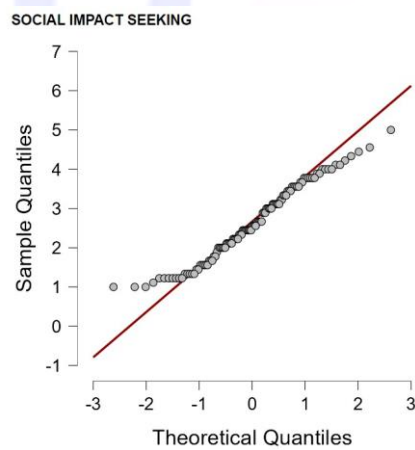
Dimensions	<i>Mean</i>	<i>Std. Deviation</i>	<i>Minimum</i>	<i>Maximum</i>
Social Impact Seeking	2.587	0.974	1.000	5.000
Social Connection	3.577	0.854	1.000	5.000
Emotional Escape	3.586	0.727	1.000	5.000
Souvenir Keeping	3.610	1.081	1.000	5.000
Attention Seeking	2.857	1.029	1.000	5.000
Information Seeking	3.822	0.739	1.500	5.000
Loneliness (-ULS 17)	45.804	9.873	21.000	70.000

Correlation hypothesis testing was conducted in this study. The Pearson parametric correlation test can only be used when assumptions of normality and linearity are met. If either the normality assumption or the linearity assumption isn't met, then an alternative correlational hypothesis test, namely the non-parametric Spearman, can be used. The non-parametric Spearman test is a hypothesis test that looks at the relationship between two variables measured on an ordinal scale, therefore, it can still be performed even on datasets that do not meet the criteria for the normality assumption or the linearity assumption.

Table 3. Normality Test

Dimensions	P-Value of Shapiro-Wilk
Social Impact Seeking	0.011
Emotional Escape	0.010
Souvenir Keeping	<.001
Social Connection	0.007
Attention Seeking	0.006
Information	<.001
Seeking Loneliness	0.941

Based on the normality test, the data collected using the Instagram Motive Questionnaire (IMQ) measuring instrument is not normal. This result is consistent with those found by Saletti et al. (2023), where the results collected using the IMQ instrument were not normally distributed. However, the results of the data collected using the UCLA Loneliness Scale (ULS) were found to be normally distributed. Because of the results of the normality assumption test, this study will proceed using the Spearman nonparametric correlation test.



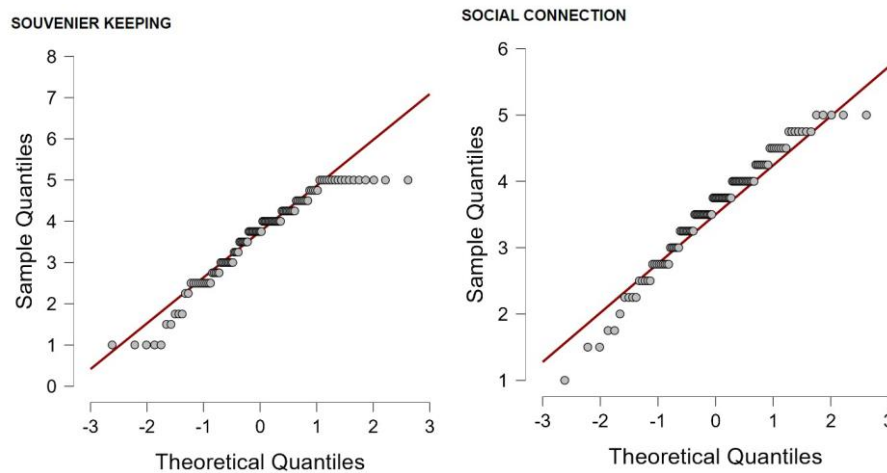


Figure 1. Linearity Testing of each dimension of IMQ and ULS

Quantile-quantile (Q-Q) plots can be used to see linearity. The more points on the Q-Q plots are attached to the slanted line, the more linear the data is. Based on the Q-Q plots listed above, we stated that the data obtained through the Instagram Motives Questionnaire (IMQ) and UCLA Loneliness Scale version 3 (ULS-3) measurement tools passed the linearity test.

Table 4. IMQ Dimension & Loneliness Correlation Matrix Analysis

Dimensions	Spearman's rho	P-Value	Effect size (Fisher's z)
Social Impact Seeking	-0.203*	0.015	-0.206
Emotional Escape	0.056	0.721	0.056
Souvenir Keeping	-0.068	0.238	-0.068
Social Connection	-0.151	0.055	-0.152
Attention Seeking	-0.128	0.088	-0.129
Information Seeking	-0.058	0.270	-0.058

*p < .05, **p < .01, ***p < .001

This table shows that only the *Social Impact Seeking* dimension has a significant negative correlation relationship with loneliness ($\rho = -0.203$, $p = 0.015$), with an effect size of -0.206 , which is a small but statistically significant relationship. This means that the higher a person's motivation to seek social impact on Instagram, the lower their level of loneliness. Other dimensions, such as Emotional Escape, Souvenir Keeping, Social Connection, Attention Seeking, and Information Seeking, do not show significant relationships with loneliness ($p > 0.05$), so it can be concluded that these motives are not correlated to a person's level of loneliness.

To analyze the influence of each dimension of the variable Instagram use motives on loneliness, we use the multiple linear regression statistical technique with the stepwise method. For further assumption testing required for our linear regression hypothesis testing, we performed the Durbin-Watson test for autocorrelation, and then we checked for homoscedasticity and normality of residuals.

Table 5. Durbin-Watson test for autocorrelation (Social Impact Seeking & Loneliness)

Model	Autocorrelation	Statistic	p
Model 0	-0.044	0.015	0.656
Model 1	-0.054	0.721	0.604

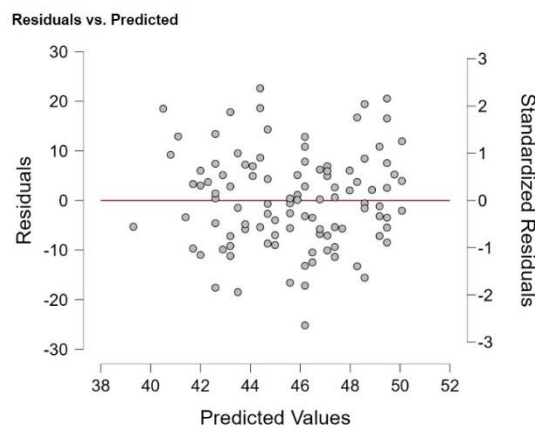


Figure 2. Homoscedasticity Test (Social Impact Seeking & Loneliness)

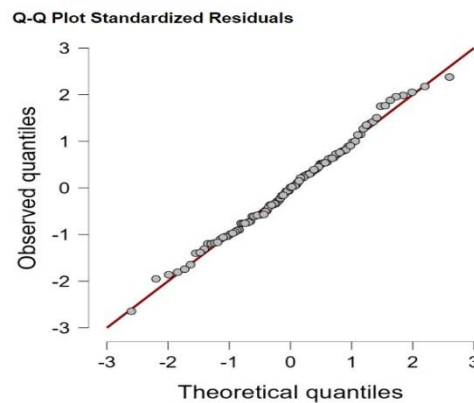


Figure 3. Normality of Residuals Test (Social Impact Seeking & Loneliness)

From the Durbin-Watson test conducted above to check for any autocorrelation, we can see that both model 0 ($p > 0.05$) and model 1 ($p > 0.05$) do not show any significant autocorrelation. Aside from that, the test for homoscedasticity shows that the assumption was met, and the test for normality of residuals also showed that this assumption has been met. In conclusion, assumption tests showed that the assumptions to perform linear regression hypothesis testing have been met. With that, we move on to linear regression hypothesis testing between the Social Impact Seeking motive for Instagram use and loneliness.

Table 6. Multiple Linear Regression (Social Impact Seeking & Loneliness)

Model 1	R	R ²	F	t	p
Social Impact Seeking	0.266	0.071	7.978	-2.825	0.006**

* $p < .05$, ** $p < .01$, *** $p < .001$

The linear regression hypothesis testing of the Social Impact Seeking motive for Instagram use against loneliness shows that the Social Impact Seeking motive has a significant impact on loneliness ($p < 0.01$). Using our model of stepwise multiple linear regression, the Social Impact Seeking motive for Instagram use can explain 7.1% of loneliness. On the other hand, other dimensions do not have a significant effect on loneliness. In addition, many other independent variables may affect the level of loneliness in early adulthood.

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4. Discussion

From the results of our analysis of the relationship between different Instagram usage motives and loneliness, we found a significant relationship between the Social Impact Seeking motive for Instagram use and loneliness ($\rho = -0.203$) with an effect size of -0.206 . These results show how the motive for using social media is related to loneliness, especially in the early adult population. This is also discussed through Pittman's (2015) research, which shows that individuals may use social media, including Instagram, as a way to overcome loneliness.

According to Cacioppo and Patrick (2008)'s theory of loneliness, loneliness itself can increase a person's sensitivity to social threats. Someone who experiences loneliness tends to be more vigilant against ambiguous social stimuli, including interactions that occur on Instagram. The Social Impact Seeking motive for Instagram use can position individuals in situations that are open to various types of social stimuli, while individuals with high and chronic loneliness can have their perception of such social stimuli worsened. Loneliness causes distorted social cognition and affects people's social behavior in ways that are inconsistent with the initial adaptive function of loneliness, namely the encouragement of relationship formation and maintenance, and instead causes a behavioral tendency to isolate oneself excessively (Cacioppo & Patrick, 2008).

One interesting thing about the findings in this study is that the motive for using Instagram Social Connection did not display a negative correlation with loneliness. Cacioppo and Patrick (2008) state that the important thing to overcome loneliness is the quality of relationships, not quantity. Instagram is a platform that makes it easy for its users to find new people, but it cannot substitute in-person relationships (Pilek & de Saint-Laurent, 2024). Previous research by Bonsaksen et al. (2023) conducted on 1,578 participants also found that the motive for using social media aimed at maintaining relationships and gaining social contact had a significant impact on increasing their loneliness, even greater than the impact brought about by the motive for using social media directed at avoiding unpleasant emotions, which should be a surprise considering the bodies of literature out there that supports the negative impacts of avoidant emotional coping.

According to Cacioppo & Patrick (2008), participants are advised to build more meaningful relationships with those closest to them to reduce loneliness. We emphasize that online relationships are difficult to develop into deep closeness. Instagram can be functional in terms of helping one meet more people, but it is not entirely effective at maintaining and growing the quality of relationships.

Previous studies have examined the influence of social media use in general and social media usage intensity on loneliness (Saletti et al., 2023; Primack et al., 2017). This can also be seen from the research conducted by Andromeda & Kristanti (2017), which discussed the use of social media's strong correlation with loneliness in early adulthood. The findings in this study indicate that the motive for using Instagram can be among the many nuances we can explore to further develop our understanding regarding the impacts of Instagram use.

On the other hand, the small effect size found between Social Impact Seeking motives and loneliness may indicate that there is a more complex relationship between Instagram usage motives and loneliness. The presence of moderator or mediator variable factors, such as self-esteem (Boursier et al., 2020) and Instagram usage patterns (e.g., content creation, interacting with others, or passive content consumption), can affect the correlational relationship between loneliness and Instagram usage motives. Research conducted by Yavich et al. (2019) shows that the effects of Instagram use are complex, and that its effects on loneliness are not always positive and are highly dependent on social media usage patterns. This strongly supports the idea that the effects of social media use can have positive or negative impacts depending on the "how?" and the "why?" of Instagram users. The world of possibilities indicated by the findings in this research leads us to strongly encourage further research into this gap of knowledge.

5. Conclusions

This study shows that the motives for using Instagram are related to loneliness in early adulthood in the Jabodetabek area, especially the Social Impact Seeking motive. Individuals who use Instagram as a medium to gain social recognition or to impact others (Social Impact Seeking) tend to feel a decrease in loneliness levels among participants. This study also highlights a significant relationship between the motives for using Instagram, which reflects the complexity of individuals' social needs

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and motivations in using social media. This study supports the importance of understanding the nuances of the relationship between loneliness and Instagram use.

This study supports a more nuanced approach to interventions on social media use. It also provides implications for the development of intervention strategies tailored to each individual's unique characteristics and needs that can help individuals overcome loneliness through healthier Instagram use. Based on the research objectives, the results of this study suggest that motives behind Instagram usage remain a feasible point of research and intervention. It is hoped that with more research into how Instagram motives influence loneliness, preventative and curative interventions, such as evidence-based psychoeducation, seminars, and digital literacy, or other interventions on a community scale can be developed to better address the disruptive social phenomenon that the rise of social networking sites (SNS) represents.

A limitation of this study is that it uses a sampling technique that doesn't maximize representativeness, so further research is advised to apply a representative method. The measuring instrument used also has a relatively unclear face validity due to its construction process that is heavily dependent on factor analysis without clear theoretical constructs that represent each dimension. Unclear theoretical constructs that underlie the operationalization of the instrument may make it difficult to hypothesize and discuss each dimension's relationship with another construct, so the instrument used needs to be adjusted to be more relevant to the construct the researcher is looking to measure. In addition, future research can use a longitudinal design to assess the stability of the relationship between Instagram usage motives and loneliness, as well as explore mediator and moderator variables. Future researchers also suggest using an instrument that measures state loneliness to complement research data.

Another limitation of this study is that it does not include moderator variables, such as age, gender, culture, relationship status, self-esteem, education level, and Instagram usage patterns. Our current research indicates that there is a more complex relationship between Instagram usage motives and loneliness, so to get a complete picture of the dynamics of the impact of Instagram usage motives, research is needed that describes several variables that can moderate the visible relationship. Therefore, future research can include moderator variables, such as age, gender, culture, relationship status, self-esteem, education level, and Instagram usage patterns.

The novelty of this study is the finding that only one dimension of the motive for using Instagram influences loneliness. In addition, another novelty is the use of IMQ as a measuring tool for the motives of using Instagram, which is the first time it has been used in Indonesia with research subjects who are Indonesian people who understand English well. Aside from that, this research is the first research that we know of that looks into the correlational relationship between the IMQ motives and loneliness. In the future, adaptation and translation according to more complete procedures are very necessary.

6. CRediT Authorship Contribution Statement

Caleb Gideon: Conceptualization, Data curation, statistical analysis. **Chrisvia Victory Masinambow:** Introduction, writing-review & literature review. **Wahyuda Abdia Putra:** Software, Data analysis, discussion. **Putri Daniela Ekaristia Rorong:** Limitations, Novelty, Conclusion. **Priska Eunike Siwabessy:** Reference check. **Nice Vyani Anthony:** Reference check. **Yusak Novanto:** Editing, supervision, review, final commentary.

7. Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

8. Declaration of Generative AI and Assistive Technologies in the Writing Process

During the preparation of this work, the authors used grammarly to check errors in the English language. After utilizing this tool, the authors thoroughly reviewed and edited the content as necessary and took full responsibility for the final content of the published article.

9. Funding

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10. Ethical Approval

All participating students provided written informed consent after receiving oral and written information about the study, including the information that participation in the study was voluntary. All data were processed anonymously and cannot be traced to any students. The study was approved by the Faculty of Psychology UPH ethical review board (20200186 /ETIK/ Research/ F-PsiUPH/IV/2025).

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12. References

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