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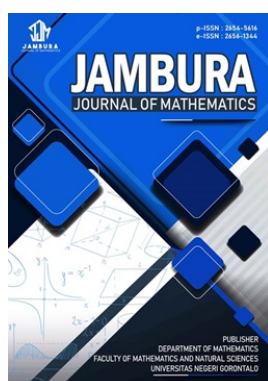


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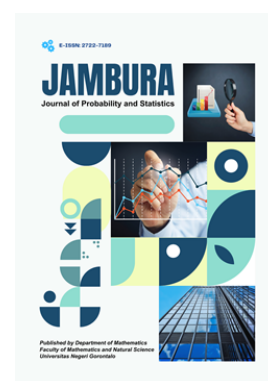
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Association Between TikTok Use and Insecurity Among Indonesian Generation Z: A Spearman Rank Correlation Study

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ABSTRACT. The rapid growth of TikTok among Generation Z users has raised concerns about its psychological effects, particularly feelings of insecurity. This study examines the relationship between TikTok usage and insecurity among Generation Z using a quantitative correlational design. Data were collected via an online questionnaire from 121 Generation Z respondents aged 13–28 years who were active TikTok users and selected through purposive sampling. TikTok usage was measured through three indicators—attention, appreciation, and duration of use—while insecurity was measured through low self-esteem, anxiety, and fear of judgment by others. Both instruments demonstrated good validity and reliability, with Cronbach's Alpha values of 0.775 and 0.897, respectively. Data were analyzed using Spearman's rank correlation in SPSS. The results revealed a statistically significant, moderate positive correlation between TikTok usage and insecurity ($r_s = 0.541$, $p < 0.001$, $n = 121$), indicating that higher TikTok engagement is associated with greater insecurity, although this does not necessarily imply a direct causal effect. These findings support the view that intensive engagement with visually oriented social media platforms is associated with psychological factors such as low self-esteem, anxiety, and fear of negative evaluation among Generation Z. The study underscores the importance of balanced and self-regulated social media use and suggests further research into mediating factors such as social comparison and self-esteem.



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1. Introduction

Technological advancements have brought about significant changes in how people communicate and access information. Since its emergence in the early 2000s with platforms such as Friendster and MySpace, social media has evolved into a global tool for communication and information through platforms such as Facebook, Instagram, Twitter, TikTok, and YouTube [1]. Social media has become an integral part of human life, particularly as a means of communication. TikTok is an application that offers unique and engaging special effects, allowing users to easily create short videos that capture viewers' attention [2]. TikTok is a Chinese social networking and music video platform launched in September 2016 [2]. The application features engaging and user-friendly tools that enable anyone to produce creative and captivating videos. Consequently, TikTok has successfully attracted a massive user base [3].

According to an APJII report, Generation Z, comprising individuals born between 1997 and 2012, dominates TikTok usage in Indonesia. Generation Z leads with 32.3%, followed by Millennials or Generation Y, born between 1981 and 1996, at 31.9%; Generation X, born between 1965 and 1980, at 31.2%; Baby Boomers, born between 1946 and 1964, at 30.7%;

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and Pre-Boomers, born before 1945, at 30.6% [3]. These findings indicate that TikTok is most popular among young adults, who are generally in the transitional phase between completing higher education and starting a professional career. The 13–17-year-old age group accounts for 500,000 users, the smallest number compared with other age groups [4].

Generation Z—also known as “Centennials”—comprises individuals born between 1997 and 2012, immediately following the Millennial generation or Generation Y [5]. The characteristics of Generation Z can be categorized into four areas, all grounded in the fact that they are a generation in search of truth. The first characteristic is “the undefined ID”; their quest for self-identity leads them to value the uniqueness of every individual without making assumptions. The second is “the communaholic,” identifying a generation deeply interested in leveraging advanced technology to create a positive impact. The third is “the dialoguer”; as skilled communicators, they believe that effective dialogue can resolve any issue and that change begins with conversation. The fourth is “the realistic,” describing a generation that is analytical and takes a more realistic approach to decision-making than previous generations [6].

Fear of Missing Out (FoMO) is a feeling of anxiety, restlessness, and fear regarding the loss of valuable moments experienced by friends or peer groups while one is unable to participate in them [7]. A common behavioral trait is frequently checking social media solely to monitor status updates posted by peers. FoMO is a defining characteristic of Generation Z. As previously mentioned, Generation Z comprises individuals born between 1997 and 2012, a period marked by rapid internet development; indeed, many individuals in this cohort were exposed to internet-enabled technology while still at a pre-verbal stage of life [7]. Often referred to as the “internet generation,” they find it difficult to disconnect from the online world. Even when arranging meetings with friends at local eateries or cafes, they tend to prioritize the availability of Wi-Fi. FoMO can foster feelings of insecurity stemming from the belief that one cannot keep up with trends, a mindset that can trigger fear and a loss of self-confidence. Consequently, FoMO has emerged as a significant factor contributing to the insecurity experienced by Generation Z [8].

Previous studies have examined the influence of TikTok use on adolescents’ self-confidence [9], explored insecurity associated with TikTok and Instagram through qualitative approaches [10], and investigated the relationship between social media usage intensity and insecurity using correlational methods [11]. However, among the studies reviewed, limited attention has been given to the association between TikTok usage and insecurity when TikTok usage is operationalized through attention, appreciation, and duration of use. Similarly, insecurity has rarely been examined as a composite construct reflected in low self-esteem, anxiety, and fear of negative evaluation within a sample of Indonesian Generation Z TikTok users.

The contribution of this study does not lie in the use of Spearman’s rank correlation as a novel statistical method. Rather, it lies in examining the association between TikTok usage and insecurity using these specific indicators within the context of Indonesian Generation Z respondents. Spearman’s rank correlation is employed because it is methodologically appropriate for examining the relationship between composite scores derived from Likert-scale questionnaire items without assuming normality. This method has also been applied in previous correlational research, including the analysis of the relationship between temperature and monthly rainfall in Padang City [12].

Therefore, this study aims to determine the direction, strength, and statistical significance of the association between TikTok usage and insecurity among the active Generation Z TikTok users included in this study. Specifically, it examines whether higher TikTok usage

scores, measured through attention, appreciation, and duration of use, are associated with higher insecurity scores, measured through low self-esteem, anxiety, and fear of negative evaluation. The findings are expected to provide empirical evidence regarding this association and to support further research examining potential mediating factors, including social comparison, self-esteem, and fear of negative evaluation.

2. Methods

This study employs a quantitative approach to examine the relationship between TikTok social media usage and insecurity among Generation Z. A quantitative approach is considered appropriate because it enables variables to be measured numerically and statistical analysis to be applied to examine relationships between variables. This research is designed as a correlational study that focuses on identifying the existence, direction, and strength of the relationship between the independent variable, TikTok usage, and the dependent variable, insecurity, without manipulating either variable.

Generation Z (Gen Z) refers to individuals born between 1997 and 2012. They grew up during a period of rapid technological and informational development and consequently possess broader access to knowledge about world cultures. Therefore, wisdom is necessary to navigate this era [13]. This study uses primary data collected directly from respondents through an online questionnaire distributed via Google Forms. The respondents were members of Generation Z born between 1997 and 2012 who met the following inclusion criteria:

1. Aged 13–28 years in 2025;
2. Active TikTok users with an account; and
3. Regular TikTok users.

Because the sample included respondents aged 13–17 years, informed consent and parental or guardian consent for minors were obtained before participation. A total of 121 respondents met the inclusion criteria and were included in the final dataset. The sampling technique used in this study was purposive sampling, in which respondents were selected based on predefined criteria relevant to the research objectives.

No formal *a priori* power analysis was conducted; the sample size was determined pragmatically based on respondent accessibility during the study period. As a *post hoc* reference, a bivariate correlation test with $\alpha = 0.05$, a statistical power of 0.80, and an expected moderate effect size of $r \approx 0.30$ requires a minimum of approximately 84 respondents. Therefore, the achieved sample of 121 respondents was sufficient to detect a moderate correlation, although the absence of a prospective power analysis remains a limitation of this study.

This study comprises two variables: an independent variable and a dependent variable. The independent variable (X) is TikTok usage, which is operationalized through three key indicators. Attention and appreciation capture the psychological and behavioral-interaction dimensions of engagement, such as focusing on content and liking, commenting on, or sharing content. Duration of use captures the behavioral-frequency dimension, namely the amount of time spent on the platform.

These three indicators were treated as forming a single composite TikTok usage construct. However, attention and appreciation reflect psychological and interactional engagement, whereas duration reflects usage behavior. Therefore, combining these indicators into a single construct represents an assumption of this study rather than an empirically confirmed unidimensional structure. Ideally, this structure should be verified through exploratory factor analysis (EFA) or confirmatory factor analysis (CFA) in future research.

In terms of measurement structure, duration was operationalized through Likert-scale

questionnaire items and was included among the items summed to form the composite TikTok usage score together with the attention and appreciation items. This measurement differs from the three-category daily-duration classification presented in Table 2. The categories of less than 1 hour, 1–2 hours, and more than 2 hours were derived separately and used only to describe respondent characteristics. Therefore, this categorical variable was not included or double-counted in the composite TikTok usage score used in the Spearman correlation analysis.

The dependent variable (Y) is insecurity, measured through three indicators: low self-esteem, anxiety, and fear of judgment by others. Each indicator was operationalized into specific questionnaire items based on relevant theoretical frameworks and previous studies to maintain alignment between the conceptual constructs and their empirical measurement.

The research instrument was a structured questionnaire designed to measure TikTok social media usage and insecurity among Generation Z. The questionnaire consisted of closed-ended statements measured using a 5-point Likert scale ranging from 1, indicating *strongly disagree*, to 5, indicating *strongly agree*. The instrument was developed using a construct-based measurement approach to ensure that each item reflected the theoretical dimensions of the variables under investigation.

The measurement of TikTok usage is grounded in the Uses and Gratifications Theory (UGT) within the context of digital media. This theory explains that individuals actively use social media to fulfill psychological and social needs, including entertainment, information seeking, and self-expression. In line with recent studies on short-video platforms, user engagement was operationalized through attention, appreciation, and duration of use [14, 15]. These indicators reflect the behavioral and psychological aspects of engagement with TikTok content.

Meanwhile, the insecurity construct is based on Social Comparison Theory, Fear of Negative Evaluation, and contemporary self-concept theories in digital environments. Insecurity is conceptualized in this study as a psychological condition characterized by low self-esteem, anxiety, and fear of judgment by others, which may be associated with continuous exposure to idealized content and social-feedback mechanisms on social media platforms [13, 16–21]. Related literature has also discussed the psychological well-being of young social media users in digital environments [21]. Rahmawati [22] highlights that academic pressure, competition, and excessive exposure to digital media may affect the mental well-being of Generation Z students.

Beyond hindering productivity, intensive social media use may also be associated with students' mental health. Exposure to content that triggers social evaluation, achievement pressure, and information overload may contribute to stress, anxiety, feelings of insecurity, and overthinking [23]. Recent studies indicate that Generation Z users demonstrate strong engagement with social media platforms and may be influenced by online environments, including interactions with digital creators and social networks [24, 25]. Therefore, frequent interaction with social media platforms does not necessarily indicate that all Generation Z users experience insecurity. However, continuous exposure to comparison-based online environments may increase their susceptibility to insecurity related to self-esteem, anxiety, and concerns about social evaluation.

The validity of the instrument was assessed quantitatively through item validity testing. Specifically, item–total correlation analysis using the Pearson product–moment correlation was employed to examine the extent to which each questionnaire item correlated with the total score of its respective construct. An item was considered valid if its correlation coeffi-

cient, or r_{count} , was greater than the corresponding r_{table} value at a significance level of 0.05 or if its significance value was less than 0.05. Items that did not meet these criteria were considered invalid and excluded from further analysis [26].

Item discrimination was also examined using corrected item–total correlation. This procedure provides preliminary support for construct validity, although full confirmation would require factor-analytic evidence, such as EFA or CFA. Therefore, the statistical validation conducted in this study provides preliminary evidence that the instrument items are consistent with their intended constructs based on observable data patterns rather than subjective judgment. More definitive evidence of construct validity would require factor-analytic confirmation.

To evaluate measurement consistency, instrument reliability was tested using Cronbach's Alpha coefficient. A Cronbach's Alpha value of at least 0.70 indicates acceptable internal consistency among the items within a construct [27]. Data were analyzed using non-parametric statistical methods because the variables were derived from Likert-scale questionnaire items and no assumption of normality was imposed. The data-analysis procedures consisted of:

1. Data screening and cleaning to ensure completeness and consistency;
2. Descriptive statistical analysis to describe respondent characteristics and variable distributions;
3. Spearman's rank correlation analysis to examine the relationship between TikTok usage and insecurity; and
4. Interpretation of the results based on relevant theories and previous empirical studies.

Spearman's rank correlation is a non-parametric statistical method used to measure the strength and direction of the relationship between two ordinal variables or variables that do not satisfy the assumptions required for parametric correlation analysis [28]. Spearman's rank correlation is appropriate when the variables are ordinal or when a monotonic association is examined without assuming normality [24, 29]. The Spearman rank correlation coefficient is calculated using eq. (1):

$$r_s = 1 - \frac{6 \sum_{i=1}^n d_i^2}{n(n^2 - 1)}, \quad (1)$$

where r_s denotes Spearman's rank correlation coefficient, d_i denotes the difference between the two ranks for the i th pair of observations, and n denotes the number of paired observations.

3. Results and Discussion

3.1. Respondent Data

The respondent data collected in this study are presented as frequency distributions based on several characteristics, including gender, daily duration of TikTok usage, level of engagement with TikTok, and level of insecurity. The distribution of respondents by gender is presented in Table 1, while the distribution based on the daily duration of TikTok usage is shown in Table 2.

Table 1. Respondent characteristics by gender.

No	Gender	Frequency	Percentage
1	Male	11	9.09%
2	Female	110	90.91%

Table 2. Daily duration of TikTok usage.

No	Duration of Use	Frequency	Percentage
1	Less than 1 hour	23	19.0%
2	Between 1 to 2 hours	19	15.7%
3	More than 2 hours	79	65.3%

Table 1 and **2** indicate that most respondents are female and that most of them use TikTok for more than 2 hours per day. This aligns with the large number of TikTok users and the emergence of new trends, including fashion, lifestyle, and food trends. The gender composition is notably imbalanced, with 110 female respondents (90.91%) and 11 male respondents (9.09%). Because insecurity may differ according to gender and age group, and these variables were not statistically controlled for in the correlation analysis, the findings should be interpreted as reflecting this predominantly female sample rather than Generation Z as a whole. Furthermore, respondent data based on the level of engagement with TikTok are presented in **Table 3**, while respondent data based on the level of insecurity are presented in **Table 4**.

Table 3. Respondent distribution by level of engagement.

No	Engagement Level	Frequency	Percentage
1	Low	2	1.7%
2	High	119	98.3%

Based on **Table 3**, the level of user engagement on the TikTok platform is considered high, reaching 98.3% of the total respondents. With only 2 respondents (1.7%) in the low-engagement category, this distribution provides a statistically inadequate comparison group for assessing whether the proportion of insecurity differs between low- and high-engagement users. Therefore, this category-level result should be interpreted as descriptive only.

This report does not specify the score cut-off used to define the low- and high-engagement categories, whether the cut-off was based on the median, mean, or a percentage threshold, whether it was derived from a validated instrument, or whether it was established before or after the data were examined. These details should be reported explicitly in future analyses of this dataset. A distribution this concentrated, with 98.3% of respondents in one category, may reflect several possibilities, including an inappropriate categorization cut-off, a ceiling effect resulting from the inclusion criteria requiring active and regular TikTok users, a limited ability of the instrument to discriminate between engagement levels, or a consequence of the purposive sampling strategy.

Because of these limitations, this categorical engagement variable was not used in the main Spearman correlation analysis. Instead, the continuous composite TikTok usage score, incorporating attention, appreciation, and duration of use, was used, as reported in the following analysis. This finding is consistent with the fact that the respondents included in this study were active TikTok users. TikTok has become one of the most favored and frequently used social media platforms in the daily lives of Generation Z. Frequent TikTok use appears to be associated with users' level of attention toward the platform. Given the cross-sectional correlational design of this study, this pattern indicates an association rather than a causal effect of TikTok usage on insecurity among Generation Z respondents.

Table 4 presents the distribution of respondents based on their level of insecurity. The results show that most respondents fall into the high-insecurity category, with 68 respondents (56.2%), while 53 respondents (43.8%) are classified as having a low level of insecurity. This

Table 4. Respondent distribution by level of insecurity.

No	Insecurity Level	Frequency	Percentage
1	Low	53	43.8%
2	High	68	56.2%

indicates that more than half of the respondents in this study experience a relatively high level of insecurity. The findings suggest that insecurity is relatively common within this sample and may be associated with respondents' exposure to and engagement with TikTok.

3.2. Validity and Reliability Tests

Validity testing was conducted to determine whether the developed questionnaire was consistent with the intended measurement objectives. Fundamentally, validity assesses the appropriateness of each question or statement item within a research instrument [30]. Before the instrument was tested, the completed questionnaires were scored so that each response item was assigned a numerical value. The validity of each item was subsequently assessed by calculating the correlation coefficient between the individual item score and the total score of its respective variable. An item was considered valid when $r_{\text{count}} > r_{\text{table}}$. Because the instrument was evaluated using data from 121 respondents, the degrees of freedom were calculated as $df = n - 2 = 121 - 2 = 119$. At a significance level of $\alpha = 0.05$, the critical correlation value was $r_{\text{table}} = 0.1786$. The results of the instrument validity test are presented in Table 5.

Table 5. Results of the instrument validity test.

Variable	Item	r_{count}	r_{table}	Interpretation
TikTok	1	0.532	0.1786	Valid
	2	0.558	0.1786	Valid
	3	0.595	0.1786	Valid
	4	0.559	0.1786	Valid
	5	0.580	0.1786	Valid
	6	0.421	0.1786	Valid
	7	0.656	0.1786	Valid
	8	0.559	0.1786	Valid
	9	0.645	0.1786	Valid
	10	0.612	0.1786	Valid
Insecurity	1	0.506	0.1786	Valid
	2	0.689	0.1786	Valid
	3	0.737	0.1786	Valid
	4	0.765	0.1786	Valid
	5	0.803	0.1786	Valid
	6	0.740	0.1786	Valid
	7	0.808	0.1786	Valid
	8	0.632	0.1786	Valid
	9	0.663	0.1786	Valid
	10	0.845	0.1786	Valid

As shown in Table 5, all items measuring TikTok usage and insecurity had r_{count} values greater than the critical value of $r_{\text{table}} = 0.1786$. Therefore, all questionnaire items were considered valid and retained for further analysis.

A reliability test was subsequently conducted to evaluate the internal consistency of the questionnaire items. Reliability was assessed using Cronbach's Alpha coefficient. A Cronbach's Alpha value of at least 0.70 indicates acceptable internal consistency, meaning that the items

within each variable consistently measure the same underlying construct [27]. The results of the reliability test are presented in Table 6.

Table 6. Results of the instrument reliability test.

Variable	Cronbach's Alpha	Interpretation
TikTok	0.775	Reliable
Insecurity	0.897	Reliable

Based on Table 6, the Cronbach's Alpha coefficients for the TikTok usage and insecurity instruments were 0.775 and 0.897, respectively. Both values exceeded the minimum acceptable threshold of 0.70. Therefore, the instruments demonstrated good internal consistency and were considered reliable for use in this study.

3.3. Spearman's Rank Correlation Test

The decision to reject or fail to reject the null hypothesis in Spearman's rank correlation test was based on the significance value (p -value) generated by SPSS. If the significance value was less than the predetermined significance level (α), the null hypothesis (H_0) was rejected, indicating a statistically significant correlation between the variables. Conversely, if the significance value was greater than α , the null hypothesis failed to be rejected, indicating insufficient evidence of a statistically significant correlation between the variables [15].

The strength of the Spearman correlation coefficient (r_s) was interpreted according to the categories presented in Table 7. The hypotheses formulated in this study were as follows:

H_0 : There is no relationship between TikTok usage and insecurity among Generation Z,

H_1 : There is a relationship between TikTok usage and insecurity among Generation Z.

Table 7. Interpretation of Spearman's rank correlation coefficient.

Coefficient Interval	Correlation Strength
$0.00 \leq r_s < 0.20$	Very low
$0.20 \leq r_s < 0.40$	Low
$0.40 \leq r_s < 0.70$	Moderate
$0.70 \leq r_s < 0.90$	High
$0.90 \leq r_s \leq 1.00$	Very high

Based on the data collected from 121 respondents, the results of Spearman's rank correlation test are presented in Table 8.

Table 8. Results of Spearman's rank correlation test.

Variable	Statistic	TikTok Usage	Insecurity
TikTok Usage	Correlation coefficient	1.000	0.541
	Sig. (2-tailed)	—	< 0.001
	N	121	121
Insecurity	Correlation coefficient	0.541	1.000
	Sig. (2-tailed)	< 0.001	—
	N	121	121

As shown in Table 8, the Spearman correlation coefficient was $r_s = 0.541$, with $p < 0.001$ and $n = 121$. Since the p -value was lower than the significance level of $\alpha = 0.01$, H_0 was rejected. Therefore, the results provide evidence of a statistically significant positive association

between TikTok usage and insecurity scores among the respondents. An approximate 95% confidence interval for the correlation coefficient, estimated using the Fisher z -transformation, ranged from 0.40 to 0.66. Based on the classification in Table 7, the coefficient of $r_s = 0.541$ indicates a moderate positive correlation. Thus, higher TikTok usage scores were associated with higher insecurity scores among the Generation Z respondents included in this study.

3.4. Discussion

The findings of this study demonstrate a statistically significant association between TikTok usage and insecurity among the predominantly female active TikTok users included in this purposively selected Generation Z sample. This result is consistent with previous research suggesting that intensive engagement with social media platforms may be associated with psychological outcomes through mechanisms such as social comparison, exposure to idealized self-presentations, and concerns regarding social evaluation. Rather than indicating a direct causal effect, the findings suggest that higher levels of TikTok engagement are associated with greater experiences of insecurity among Generation Z users.

These findings are supported by previous studies examining the relationship between social media use and psychological well-being. Previous research has indicated that high daily social media use may be associated with adverse psychological outcomes. Although social media offers benefits when used wisely, its excessive or inappropriate use may contribute to stress, anxiety, feelings of insecurity, and impaired concentration [27]. Furthermore, excessive social media use has been positively associated with increased symptoms of social anxiety, including fear of judgment by others, avoidance of social situations, and discomfort during face-to-face interactions [23].

The respondents in this study were members of Generation Z who demonstrated a high level of engagement with TikTok. This was reflected in their strong attention to and frequent interaction with TikTok content. The findings are also consistent with previous research examining insecurity and social media use among adolescents and young adults. Recent studies have reported that intensive social media engagement is associated with greater psychological vulnerability, including concerns related to self-image, anxiety, and social evaluation. Research focusing on Instagram has similarly found that frequent exposure to idealized content may contribute to insecurity among female adolescents. Furthermore, recent studies on TikTok have suggested that excessive platform use is associated with psychological difficulties among adolescents, emphasizing the importance of balanced and self-regulated social media use.

Overall, the findings of this study support previous evidence that social media engagement, particularly on visually oriented platforms such as TikTok, is associated with psychological factors related to insecurity. However, insecurity should not be interpreted as a direct consequence of TikTok usage alone, because individual characteristics, patterns of use, and the types of content consumed may influence users' psychological responses. Future research may further investigate potential mediating factors, such as social comparison tendencies, self-esteem, and fear of negative evaluation, to provide a deeper understanding of this relationship.

4. Conclusion

Based on the results obtained from 121 respondents, most participants were female and reported using TikTok for more than 2 hours per day. Spearman's rank correlation analysis indicated a statistically significant, moderate positive association between TikTok usage scores

and insecurity scores among Generation Z respondents ($r_s = 0.541$, $p < 0.001$, $n = 121$) at the significance level of $\alpha = 0.01$.

Therefore, among the predominantly female active TikTok users included in this purposively selected sample, higher TikTok usage scores were associated with greater experiences of insecurity, including low self-esteem, anxiety, and fear of negative judgment. However, these findings do not imply that TikTok usage directly causes insecurity, because psychological responses to social media may vary depending on individual characteristics, patterns of use, and the types of content consumed. The findings support previous research suggesting that social media engagement may be associated with self-perception and psychological well-being among adolescents and young adults, particularly those belonging to Generation Z.

This study has several limitations. First, the respondents were selected based on specific inclusion criteria and may not fully represent the broader Generation Z population. Second, the data were collected through an online questionnaire that relied on self-reported responses, which may have been influenced by respondents' perceptions, memory, or interpretation of the statements. Third, this study does not present descriptive statistics, including means and standard deviations, for the composite TikTok usage and insecurity scores, nor does it provide a scatterplot to assess the monotonic relationship assumed by Spearman's rank correlation. Future reporting of this dataset should include these elements to improve the transparency and auditability of the correlation results.

Fourth, the TikTok usage construct combines a behavioral-frequency indicator, namely duration of use, with psychological and interactional indicators, namely attention and appreciation, into a single composite score without empirical confirmation through factor analysis that these indicators form a unidimensional construct. Therefore, the assumed measurement structure should be examined through exploratory or confirmatory factor analysis in future research. Fifth, the sample was heavily skewed toward female respondents (90.91%) and consisted exclusively of active, regular TikTok users recruited through purposive sampling. Gender and age were not statistically controlled for, even though insecurity may vary according to gender and developmental stage. Moreover, the concentration of respondents in the high-engagement category (98.3%) provided limited variation for category-based comparisons.

Consequently, the findings should not be generalized to Generation Z as a whole and should instead be interpreted as applying specifically to the predominantly female, highly engaged, active TikTok users included in this sample. Future studies should consider more diverse and representative samples, control for relevant demographic variables, verify the measurement structure of the constructs, and combine survey methods with other approaches to provide a more comprehensive understanding of the relationship between TikTok usage and insecurity.

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