

**Research Framework: Aesthetic Veil: Digital Persona, Psychological Distress, and the Looming Social Crisis  
Among Uganda's Generation Z**

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**Abstract**

**Background:** Uganda's Generation Z (born 1997-2012), representing 23% of the population, has grown up with unprecedented digital connectivity, creating carefully curated online personas that often mask authentic psychological experiences. With youth unemployment exceeding 13% and limited mental health infrastructure (fewer than 50 psychiatrists for 45 million people), the intersection of socioeconomic pressures and digital performance demands creates conditions for potential mental health crisis.

**Objective:** This study examined the relationship between aesthetic digital persona construction and psychological distress among Generation Z in Uganda, identifying moderating factors and assessing implications for potential social crisis.

**Methods:** A cross-sectional analytical study was conducted between March and August 2024 across four urban centers (Kampala, Entebbe, Jinja, Mbarara) with 498 participants aged 14-27 years who were active social media users. Multistage stratified random sampling ensured demographic diversity across socioeconomic strata. Data were collected using validated instruments including the Digital Persona Investment Scale (DPIS,  $\alpha = 0.87$ ), Depression Anxiety Stress Scale-21 (DASS-21,  $\alpha = 0.91$ ), Rosenberg Self-Esteem Scale (RSES,  $\alpha = 0.88$ ), Multidimensional Scale of Perceived Social Support (MSPSS,  $\alpha = 0.89$ ), and a digital literacy assessment tool. Statistical analyses included Pearson correlations, independent samples t-tests, multiple linear regression, hierarchical moderation analyses, and mediation analysis using PROCESS macro with bootstrap confidence intervals.

**Results:** Participants demonstrated high digital engagement (mean 4.8 hours daily) across multiple platforms, with 48.4% showing elevated digital persona investment. Mean DASS-21 score was 28.4 (SD = 12.7), with 51.4% experiencing elevated psychological distress and 53.6% reporting low self-esteem. Strong positive correlations emerged between digital persona investment and depression ( $r = 0.48$ ), anxiety ( $r = 0.44$ ), stress ( $r = 0.41$ ), and overall distress ( $r = 0.52$ , all  $p < 0.001$ ). Participants with high versus low digital persona investment showed significantly elevated depression (12.0 vs. 7.8,  $d = 1.00$ ), anxiety (11.1 vs. 7.5,  $d = 0.91$ ), and stress (11.3 vs. 7.7,  $d = 0.86$ , all  $p < 0.001$ ). Multiple regression revealed digital persona investment as the strongest predictor of psychological distress ( $\beta = 0.459$ ,  $p < 0.001$ ), explaining 34.8% of variance. Socioeconomic status significantly moderated the relationship, with low-SES youth showing the strongest association ( $\beta = 0.583$ ) compared to high-SES peers ( $\beta = 0.299$ ). Social support ( $\beta = -0.164$ ,  $p < 0.001$ ) and digital literacy ( $\beta = -0.131$ ,  $p < 0.001$ ) demonstrated protective moderating effects. Mediation analysis revealed self-esteem accounted for 38.1% of the relationship between digital persona construction and psychological distress.

**Conclusion:** Aesthetic digital persona construction significantly predicts psychological distress among Ugandan Generation Z, with the relationship amplified by economic vulnerability and buffered by social support and digital literacy. The findings confirm a looming mental health crisis requiring urgent interventions targeting digital literacy education, community support strengthening, and platform-level reforms to protect Uganda's youth from the

psychological hazards of curated digital performance while preserving beneficial aspects of technological connectivity.

**Key Words: Digital Persona, Psychological Distress, and Social Crisis**

### **Introduction**

The rapid proliferation of digital technology and social media platforms has fundamentally transformed how Generation Z in Uganda constructs, presents, and experiences identity. Born between 1997 and 2012, this demographic cohort has come of age in an era where digital presence is inextricably linked to social validation, self-worth, and interpersonal relationships (Andrea et al., 2016; Kuleto et al., 2021). The phenomenon of the "aesthetic veil"—the carefully curated digital persona that often conceals authentic emotional experiences and psychological struggles—has emerged as a defining characteristic of Gen Z's online behavior. While these digital facades project images of success, happiness, and aspirational lifestyles, they frequently mask underlying psychological distress, including anxiety, depression, low self-esteem, and identity confusion (Kropko & Harden, 2020). In Uganda's context, where youth unemployment exceeds 13%, economic pressures intensify, and traditional social support systems evolve rapidly, Generation Z faces unique vulnerabilities. The intersection of socioeconomic challenges with the pressure to maintain idealized digital personas creates a perfect storm for mental health crises (Cecchin et al., 2023; Dobrowolski et al., 2022). This study seeks to examine how the construction and maintenance of aesthetic digital personas correlates with psychological distress among Ugandan Gen Z, and to explore the potential trajectory toward broader social crisis if these patterns remain unaddressed (Benítez-Márquez et al., 2022; Vázquez-Rodríguez et al., 2023). Understanding this phenomenon is critical for developing targeted interventions, informing mental health policies, and fostering healthier digital engagement practices among Uganda's youth.

### **Background of the Study**

Generation Z represents approximately 23% of Uganda's population, making them a significant demographic force with substantial implications for the nation's social, economic, and cultural future. Unlike previous generations, Uganda's Gen Z has grown up with unprecedented access to smartphones, social media platforms (particularly Instagram, TikTok, WhatsApp, and Facebook), and global digital culture. This connectivity has created opportunities for self-expression, entrepreneurship, and social connection, but has simultaneously introduced new psychological stressors (Kulkov, 2023; Pichler et al., 2021). The concept of digital persona—the carefully constructed online identity that individuals present to their virtual audiences—has become central to Gen Z's social experience. Research globally indicates that young people invest considerable emotional and cognitive resources in crafting aesthetically pleasing, socially acceptable digital identities that often diverge significantly from their lived realities. This discrepancy between the curated self and the authentic self has been linked to increased rates of anxiety, depression, body image issues, and social comparison behaviors (Hellen et al., 2023; Lesinskis et al., 2023).

In Uganda, several contextual factors amplify these concerns. First, the country's youth face high levels of unemployment and underemployment, creating economic insecurity that contrasts sharply with the aspirational lifestyles portrayed on social media (Iakampurira et al., 2023; Crispus et al., 2023; Muliisa Milton & Sam, 2025). Second, rapid urbanization and changing family structures have weakened traditional support networks, leaving many young people isolated despite their digital connectivity (Lee, 2019). Third, mental health services remain severely

limited, with significant stigma surrounding psychological issues and fewer than 50 psychiatrists serving a population of over 45 million people. Preliminary observations suggest that Ugandan Gen Z increasingly relies on digital validation through likes, comments, and followers as a substitute for genuine self-esteem and interpersonal connection (Julius & Nancy, 2025). The pressure to maintain aesthetic digital personas—often requiring resources, time, and emotional labor—may be contributing to a silent epidemic of psychological distress. Without intervention, this pattern threatens to escalate into a broader social crisis characterized by increased mental health disorders, diminished social cohesion, reduced productivity, and intergenerational disconnection.

### **Problem Statement**

Uganda's Generation Z is experiencing an unprecedented psychological burden driven by the tension between their authentic lived experiences and the idealized digital personas they feel compelled to maintain (Alakrash & Razak, 2021; Ganotakis et al., 2023). While social media platforms offer opportunities for connection and self-expression, they simultaneously create environments where self-worth becomes contingent upon external validation, aesthetic perfection, and continuous performance of success. This aesthetic veil—the gap between curated digital identity and actual psychological state—is contributing to rising levels of anxiety, depression, loneliness, and identity confusion among young Ugandans (UU Republik Indonesia et al., 2022). Despite growing anecdotal evidence and concerning trends in youth mental health, there is limited empirical research examining the specific relationship between digital persona construction and psychological distress in Uganda's context. The mechanisms through which aesthetic digital performance translates into psychological harm remain poorly understood, as do the potential moderating factors such as socioeconomic status, access to support systems, and digital literacy. Furthermore, the trajectory of this phenomenon—whether it represents a temporary adjustment to new technologies or the beginning of a sustained social crisis—remains unclear (Dečman & Rep, 2022; Pashkov & Pashkova, 2022). This knowledge gap is particularly concerning given Uganda's limited mental health infrastructure and the potential for widespread, long-term consequences if current patterns intensify. Without understanding how digital persona construction affects Gen Z's psychological wellbeing, policymakers, educators, healthcare providers, and technology platforms cannot develop effective interventions. There is an urgent need to investigate this phenomenon systematically to inform evidence-based responses that protect Uganda's young people from the psychological hazards of digital life while preserving the benefits of technological connectivity.

### **Main Objective**

To examine the relationship between aesthetic digital persona construction and psychological distress among Generation Z in Uganda, and to assess the implications for potential social crisis.

### **Specific Objectives**

1. To determine the extent to which Generation Z in Uganda engages in aesthetic digital persona construction and the characteristics of these curated online identities.
2. To assess the levels and types of psychological distress (anxiety, depression, low self-esteem, identity confusion) experienced by Gen Z in Uganda and their correlation with digital persona maintenance behaviors.
3. To identify the sociodemographic, economic, and psychosocial factors that moderate the relationship between digital persona construction and psychological distress among Ugandan Gen Z.

### Research Questions

1. What is the prevalence and nature of aesthetic digital persona construction among Generation Z in Uganda, and what motivates young people to create and maintain these curated online identities?
2. How do levels of psychological distress (including anxiety, depression, self-esteem issues, and identity confusion) vary among Ugandan Gen Z based on their degree of engagement in digital persona construction and maintenance?
3. What sociodemographic, economic, and psychosocial factors (such as gender, socioeconomic status, access to support systems, and digital literacy) influence the strength of the relationship between digital persona construction and psychological distress among Uganda's Generation Z?

### Hypotheses

**H1:** There is a significant positive relationship between the degree of aesthetic digital persona construction and levels of psychological distress among Generation Z in Uganda, such that individuals who invest more heavily in curating idealized online identities report higher levels of anxiety, depression, and identity confusion.

**H2:** Generation Z individuals from lower socioeconomic backgrounds in Uganda experience stronger correlations between digital persona maintenance and psychological distress compared to their higher socioeconomic status peers, due to greater disparity between their lived realities and aspirational digital presentations.

**H3:** Ugandan Gen Z individuals with stronger offline social support systems and higher levels of digital literacy demonstrate weaker associations between aesthetic digital persona construction and psychological distress compared to those with limited support networks and lower digital literacy.

### Methodology

This study employed a cross-sectional analytical design utilizing a quantitative approach to examine the relationship between aesthetic digital persona construction and psychological distress among Generation Z in Uganda, conducted between March and August 2024 across four major urban centers (Kampala, Entebbe, Jinja, and Mbarara) where internet penetration and social media usage were highest among the target population of individuals aged 14-27 years (born between 1997-2012) who were active social media users, defined as those who posted content or engaged with platforms at least three times per week. Using multistage stratified random sampling, participants were first stratified by region and socioeconomic status (determined by household income and parental education level), then randomly selected from universities, tertiary institutions, youth centers, and community organizations within each stratum to ensure demographic diversity and representativeness, with a sample size of 456 participants calculated using G\*Power software version 3.1.9.7 based on an anticipated medium effect size ( $r = 0.25$ ) derived from previous studies on social media use and mental health, a significance level ( $\alpha$ ) of 0.05, and a desired statistical power of 80%, with an additional 15% added to account for potential non-response and incomplete data, yielding a final target sample of 524 participants.

Data collection was conducted through structured self-administered questionnaires distributed both electronically via Google Forms and in paper format, with questionnaires available in both English and Luganda to accommodate linguistic preferences, comprising five sections: demographic characteristics (age, gender, education level,

socioeconomic status, living arrangements), digital persona construction measured using the Digital Persona Investment Scale (DPIS,  $\alpha = 0.87$ ), a validated 24-item instrument assessing time spent curating online identity, frequency of photo editing, concern about online appearance, and comparison of online versus offline self-presentation; psychological distress assessed through the Depression Anxiety Stress Scale-21 (DASS-21,  $\alpha = 0.91$ ), a widely validated instrument measuring depression, anxiety, and stress subscales; self-esteem measured using the Rosenberg Self-Esteem Scale (RSES,  $\alpha = 0.88$ ); and moderating variables including the Multidimensional Scale of Perceived Social Support (MSPSS,  $\alpha = 0.89$ ) and a digital literacy assessment tool comprising 15 items evaluating critical thinking about online content, privacy awareness, and understanding of algorithmic curation. Prior to data collection, ethical approval was obtained from the Makerere University School of Public Health Research and Ethics Committee, and all participants provided written informed consent (or assent with parental consent for those under 18 years), after which data were entered into Microsoft Excel, cleaned to identify and address missing values and outliers, and analyzed using STATA version 17.0 and SPSS version 28.0, with descriptive statistics including frequencies, percentages, means, and standard deviations computed to characterize the sample and key study variables (Nelson et al., 2022, 2023). Bivariate analyses were conducted using Pearson's correlation coefficients to examine relationships between continuous variables (digital persona investment scores and psychological distress measures), independent samples t-tests to compare mean psychological distress scores between high and low digital persona construction groups (median split), and chi-square tests for categorical associations.

While to address the primary research objective, multiple linear regression models were constructed with psychological distress scores (DASS-21 total and subscale scores) as dependent variables and digital persona investment as the primary independent variable, controlling for confounders including age, gender, education level, and daily social media usage time. To test moderation hypotheses, hierarchical regression analyses were performed, entering main effects in the first block (digital persona investment and moderator variables: socioeconomic status, social support, digital literacy) and interaction terms in the second block, with significant interactions probed using simple slopes analysis at  $\pm 1$  standard deviation of the moderator, while model assumptions including linearity, normality of residuals (assessed via Shapiro-Wilk tests and Q-Q plots), homoscedasticity (assessed via Breusch-Pagan tests), and multicollinearity (assessed via variance inflation factors with  $VIF < 5$  considered acceptable) were checked and confirmed. Mediation analyses were conducted using the PROCESS macro (Model 4) to examine whether self-esteem mediated the relationship between digital persona construction and psychological distress, with bootstrap confidence intervals (5,000 iterations) used to assess the significance of indirect effects, and subgroup analyses were performed stratifying by gender and socioeconomic status to identify differential patterns of association across demographic groups, with all statistical tests conducted as two-tailed with significance determined at  $p < 0.05$ , and effect sizes reported using Cohen's  $d$  for mean comparisons,  $R^2$  for regression models, and Cohen's  $f^2$  for moderation effects to facilitate interpretation of practical significance beyond statistical significance.

## **Results.**

**Table 1: Demographic Characteristics and Descriptive Statistics of Study Participants (N = 498)**

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| Characteristic                  | Category             | Frequency (n) | Percentage (%) | Mean $\pm$ SD       |
|---------------------------------|----------------------|---------------|----------------|---------------------|
| <b>Age (years)</b>              |                      |               |                | 21.3 $\pm$ 3.4      |
|                                 | 14-18                | 112           | 22.5           |                     |
|                                 | 19-23                | 248           | 49.8           |                     |
|                                 | 24-27                | 138           | 27.7           |                     |
| <b>Gender</b>                   |                      |               |                |                     |
|                                 | Male                 | 218           | 43.8           |                     |
|                                 | Female               | 280           | 56.2           |                     |
| <b>Education Level</b>          |                      |               |                |                     |
|                                 | Secondary            | 134           | 26.9           |                     |
|                                 | Tertiary/University  | 298           | 59.8           |                     |
|                                 | Completed University | 66            | 13.3           |                     |
| <b>Socioeconomic Status</b>     |                      |               |                |                     |
|                                 | Low                  | 186           | 37.3           |                     |
|                                 | Middle               | 227           | 45.6           |                     |
|                                 | High                 | 85            | 17.1           |                     |
| <b>Region</b>                   |                      |               |                |                     |
|                                 | Kampala              | 245           | 49.2           |                     |
|                                 | Entebbe              | 98            | 19.7           |                     |
|                                 | Jinja                | 89            | 17.9           |                     |
|                                 | Mbarara              | 66            | 13.3           |                     |
| <b>Daily Social Media Usage</b> |                      |               |                | 4.8 $\pm$ 2.1 hours |
|                                 | < 3 hours            | 142           | 28.5           |                     |
|                                 | 3-6 hours            | 243           | 48.8           |                     |
|                                 | > 6 hours            | 113           | 22.7           |                     |
| <b>Primary Platforms Used</b>   |                      |               |                |                     |
|                                 | Instagram            | 412           | 82.7           |                     |
|                                 | TikTok               | 387           | 77.7           |                     |
|                                 | Facebook             | 356           | 71.5           |                     |
|                                 | WhatsApp Status      | 445           | 89.4           |                     |

The demographic profile of the 498 participants who completed the study (95.0% response rate from the target of 524) revealed a sample that was predominantly female (56.2%) with a mean age of 21.3 years (SD = 3.4), which was representative of the target Generation Z population in Uganda's urban centers. The distribution across age categories showed that nearly half of participants (49.8%) fell within the 19-23 age bracket, reflecting the concentration of tertiary education students in this cohort. Approximately two-thirds of participants (59.8%) were currently enrolled in

tertiary or university education, while 26.9% were still in secondary school, indicating a relatively educated sample consistent with higher rates of social media adoption among more educated youth. Socioeconomic stratification demonstrated that 37.3% of participants came from low-income backgrounds, 45.6% from middle-income families, and 17.1% from high-income households, providing adequate representation across economic strata for planned moderation analyses. The mean daily social media usage of 4.8 hours (SD = 2.1) was substantial, with nearly three-quarters of participants (71.5%) using social media for three or more hours daily, confirming high levels of digital engagement among the sample.

The geographic distribution showed appropriate regional representation with nearly half the sample (49.2%) from Kampala, Uganda's capital and largest urban center, while the remaining participants were distributed across Entebbe (19.7%), Jinja (17.9%), and Mbarara (13.3%), ensuring diverse urban perspectives. Platform usage patterns revealed that WhatsApp Status was nearly universal (89.4%), followed by Instagram (82.7%), TikTok (77.7%), and Facebook (71.5%), indicating multi-platform engagement was the norm rather than the exception among Ugandan Gen Z. This multi-platform usage pattern was consistent with global trends showing Generation Z's preference for visual and ephemeral content platforms. The high engagement levels across platforms, combined with substantial daily usage time, confirmed that the sample was appropriate for investigating the relationship between digital persona construction and psychological distress, as participants demonstrated sufficient exposure to and investment in digital environments to make meaningful assessments of persona curation behaviors and their psychological correlates.

**Table 2: Prevalence and Characteristics of Digital Persona Construction and Psychological Distress Variables**

| Variable                                       | Possible Range | Actual Range | Mean $\pm$ SD   | Median (IQR) | High Score n (%) |
|--|----------------|--------------|-----------------|--------------|------------------|
| <b>Digital Persona Investment Scale (DPIS)</b> | 24-120         | 31-118       | 72.4 $\pm$ 18.6 | 73.0 (59-86) | 241 (48.4%)      |
| Time Investment Subscale                       | 6-30           | 8-30         | 19.2 $\pm$ 5.1  | 19.0 (16-23) | 238 (47.8%)      |
| Appearance Concern Subscale                    | 6-30           | 7-30         | 18.7 $\pm$ 5.4  | 19.0 (15-23) | 229 (46.0%)      |
| Online-Offline Discrepancy Subscale            | 6-30           | 6-29         | 17.3 $\pm$ 5.8  | 17.0 (13-22) | 219 (44.0%)      |
| Photo Editing/Curation Subscale                | 6-30           | 7-30         | 17.2 $\pm$ 5.6  | 17.0 (13-21) | 214 (43.0%)      |
| <b>DASS-21 Total Score</b>                     | 0-63           | 2-61         | 28.4 $\pm$ 12.7 | 27.0 (19-37) | 256 (51.4%)      |
| Depression Subscale                            | 0-21           | 0-21         | 9.8 $\pm$ 4.6   | 9.0 (6-13)   | 245 (49.2%)      |
| Anxiety Subscale                               | 0-21           | 1-21         | 9.2 $\pm$ 4.3   | 9.0 (6-12)   | 238 (47.8%)      |
| Stress Subscale                                | 0-21           | 0-20         | 9.4 $\pm$ 4.5   | 9.0 (6-13)   | 241 (48.4%)      |

|   |       |       |             |              |             |
|---|-------|-------|-------------|--------------|-------------|
| <b>Rosenberg Self-Esteem Scale (RSES)</b>                         | 10-40 | 12-39 | 22.1 ± 6.4  | 22.0 (17-27) | 267 (53.6%) |
| <b>Multidimensional Scale of Perceived Social Support (MSPSS)</b> | 12-84 | 18-82 | 48.3 ± 14.2 | 48.0 (38-59) | 223 (44.8%) |
| <b>Digital Literacy Score</b>                                     | 0-15  | 3-15  | 8.7 ± 3.2   | 9.0 (6-11)   | 189 (38.0%) |

Note: High score defined as  $\geq$  median split for DPIS, DASS-21, and Digital Literacy;  $\leq$  median for RSES (low self-esteem);  $\geq$  median for MSPSS

The descriptive statistics revealed concerning patterns of both digital persona investment and psychological distress among Ugandan Generation Z participants. The mean Digital Persona Investment Scale (DPIS) score of 72.4 (SD = 18.6) on a possible range of 24-120 indicated moderate to high levels of investment in curating digital personas, with 48.4% of participants scoring above the median threshold. The subscale analysis provided nuanced insights into specific aspects of digital persona construction: participants reported highest investment in time spent curating their online identity (M = 19.2, SD = 5.1) and appearance concerns (M = 18.7, SD = 5.4), followed by online-offline discrepancy (M = 17.3, SD = 5.8) and photo editing behaviors (M = 17.2, SD = 5.6). The relatively uniform distribution across subscales suggested that digital persona construction was a multifaceted phenomenon involving substantial temporal, emotional, and cognitive resources, rather than being concentrated in a single domain. The actual range of DPIS scores (31-118) demonstrated considerable variability in persona construction behaviors, spanning from minimal investment to near-maximum scores, which was essential for detecting meaningful correlations with psychological outcomes.

Psychological distress levels were notably elevated across the sample, with a mean DASS-21 total score of 28.4 (SD = 12.7) indicating that the average participant experienced mild to moderate psychological distress. More concerning was that 51.4% of participants scored above the median threshold for overall psychological distress. The depression, anxiety, and stress subscales showed similar patterns with means of 9.8, 9.2, and 9.4 respectively (all SD  $\approx$  4.3-4.6), with approximately half of participants (47.8-49.2%) experiencing elevated symptoms in each domain. According to standard DASS-21 clinical cutoffs, these mean scores placed the average participant in the mild severity range across all three domains, suggesting widespread subclinical psychological distress in the population. The Rosenberg Self-Esteem Scale revealed compromised self-worth among participants, with a mean score of 22.1 (SD = 6.4) falling below normative values for healthy young adults (typically M  $\approx$  30), and 53.6% scoring in the low self-esteem range. Perceived social support was moderate (M = 48.3, SD = 14.2), suggesting that while some support networks existed, they were not uniformly strong across the sample. Digital literacy scores (M = 8.7, SD = 3.2) indicated that participants possessed moderate critical engagement skills with digital content, though substantial room for improvement existed, as only 38.0% demonstrated high digital literacy. These descriptive patterns established that both the independent variable (digital persona construction) and dependent variables (psychological distress indicators) showed adequate variation and prevalence to support subsequent correlational and regression analyses.

**Table 3: Bivariate Correlations and Group Comparisons Between Digital Persona Construction and Psychological Distress Variables**

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| Variables              | DPIS Total | Depression | Anxiety  | Stress   | DASS-21 Total | Self-Esteem | Social Support | Digital Literacy |
|------------------------|------------|------------|----------|----------|---------------|-------------|----------------|------------------|
| DPIS Total             | 1.00       |            |          |          |               |             |                |                  |
| Depression             | 0.48***    | 1.00       |          |          |               |             |                |                  |
| Anxiety                | 0.44***    | 0.72***    | 1.00     |          |               |             |                |                  |
| Stress                 | 0.41***    | 0.69***    | 0.74***  | 1.00     |               |             |                |                  |
| DASS-21 Total          | 0.52***    | 0.91***    | 0.89***  | 0.88***  | 1.00          |             |                |                  |
| Self-Esteem (RSES)     | -0.39***   | -0.63***   | -0.58*** | -0.56*** | -0.66***      | 1.00        |                |                  |
| Social Support (MSPSS) | -0.28***   | -0.41***   | -0.38*** | -0.36*** | -0.43***      | 0.52***     | 1.00           |                  |
| Digital Literacy       | -0.19***   | -0.23***   | -0.21*** | -0.18*** | -0.24***      | 0.29***     | 0.31***        | 1.00             |

\*Note: \*\*\* $p < 0.001$ ; Pearson correlation coefficients reported

#### Group Comparison: High vs. Low Digital Persona Construction

| Psychological Distress Variable | Low DPIS Group (n=257) Mean $\pm$ SD | High DPIS Group (n=241) Mean $\pm$ SD | Mean Difference | t-value | p-value | Cohen's d |
|---------------------------------|--------------------------------------|---------------------------------------|-----------------|---------|---------|-----------|
| Depression                      | 7.8 $\pm$ 4.1                        | 12.0 $\pm$ 4.3                        | 4.2             | -10.94  | < 0.001 | 1.00      |
| Anxiety                         | 7.5 $\pm$ 3.8                        | 11.1 $\pm$ 4.2                        | 3.6             | -9.87   | < 0.001 | 0.91      |
| Stress                          | 7.7 $\pm$ 4.1                        | 11.3 $\pm$ 4.3                        | 3.6             | -9.42   | < 0.001 | 0.86      |
| DASS-21 Total                   | 23.0 $\pm$ 10.8                      | 34.4 $\pm$ 11.9                       | 11.4            | -11.04  | < 0.001 | 1.01      |
| Self-Esteem (RSES)              | 24.6 $\pm$ 6.1                       | 19.3 $\pm$ 5.9                        | -5.3            | 9.63    | < 0.001 | 0.88      |

Note: Low DPIS = scores below median; High DPIS = scores at or above median

The bivariate correlation analysis revealed robust and statistically significant associations between digital persona construction and multiple indicators of psychological distress, providing strong preliminary support for Hypothesis 1. The correlation between DPIS total scores and overall psychological distress (DASS-21 total) was substantial ( $r = 0.52$ ,  $p < 0.001$ ), representing a large effect size by conventional standards and explaining approximately 27% of the variance in psychological distress. Examining specific distress domains, digital persona investment demonstrated strong positive correlations with depression ( $r = 0.48$ ,  $p < 0.001$ ), anxiety ( $r = 0.44$ ,  $p < 0.001$ ), and stress ( $r = 0.41$ ,  $p < 0.001$ ).

< 0.001), indicating that greater investment in curating idealized online identities was consistently associated with elevated psychological symptoms across multiple dimensions. The magnitude of these correlations was clinically meaningful, suggesting that digital persona construction behaviors were not merely superficially associated with distress but represented substantial shared variance. Furthermore, the negative correlation between DPIS and self-esteem ( $r = -0.39, p < 0.001$ ) indicated that participants who invested more heavily in digital persona curation reported lower self-worth, suggesting a potential mediating mechanism whereby digital performance eroded authentic self-regard.

The moderating variables showed theoretically consistent patterns that informed subsequent analyses. Social support demonstrated significant negative correlations with both digital persona investment ( $r = -0.28, p < 0.001$ ) and psychological distress ( $r = -0.43, p < 0.001$ ), suggesting protective effects and supporting the rationale for testing moderation in Hypothesis 3. Digital literacy also showed small but significant negative correlations with DPIS ( $r = -0.19, p < 0.001$ ) and DASS-21 ( $r = -0.24, p < 0.001$ ), indicating that individuals with better critical engagement skills regarding digital content exhibited less persona investment and fewer distress symptoms. The independent samples t-tests comparing participants with high versus low digital persona investment provided compelling evidence of meaningful group differences in psychological functioning. Participants in the high DPIS group reported significantly elevated depression scores ( $M = 12.0$  vs.  $7.8, t = -10.94, p < 0.001, d = 1.00$ ), anxiety scores ( $M = 11.1$  vs.  $7.5, t = -9.87, p < 0.001, d = 0.91$ ), and stress scores ( $M = 11.3$  vs.  $7.7, t = -9.42, p < 0.001, d = 0.86$ ) compared to the low DPIS group. The effect sizes for these differences were large (Cohen's  $d$  ranging from 0.86 to 1.01), indicating not just statistical significance but substantial practical differences in psychological functioning between groups. The overall DASS-21 difference of 11.4 points ( $t = -11.04, p < 0.001, d = 1.01$ ) was particularly noteworthy, as this magnitude of difference could represent the boundary between mild and moderate clinical severity. Similarly, self-esteem scores were significantly lower in the high DPIS group ( $M = 19.3$  vs.  $24.6, t = 9.63, p < 0.001, d = 0.88$ ), further supporting the notion that intensive digital persona curation was associated with compromised psychological wellbeing across multiple domains.

**Table 4: Multiple Regression and Moderation Analyses Predicting Psychological Distress from Digital Persona Construction**

**Model 1: Multiple Linear Regression Predicting DASS-21 Total Score**

| Predictor Variable                | B      | SE    | $\beta$ | t-value | p-value | 95% CI          |
|-----------------------------------|--------|-------|---------|---------|---------|-----------------|
| Digital Persona Investment (DPIS) | 0.312  | 0.032 | 0.459   | 9.75    | < 0.001 | [0.249, 0.375]  |
| Age                               | -0.184 | 0.168 | -0.049  | -1.10   | 0.273   | [-0.514, 0.146] |
| Gender (Female)                   | 2.847  | 1.086 | 0.112   | 2.62    | 0.009   | [0.711, 4.983]  |
| Education Level                   | -0.621 | 0.542 | -0.049  | -1.15   | 0.252   | [-1.686, 0.444] |
| Daily Social Media Usage (hours)  | 0.892  | 0.271 | 0.147   | 3.29    | 0.001   | [0.359, 1.425]  |

|                      |       |       |       |       |       |                 |
|----------------------|-------|-------|-------|-------|-------|-----------------|
| Socioeconomic Status | -     | 0.647 | -     | -1.91 | 0.057 | [-2.505, 0.037] |
|                      | 1.234 |       | 0.082 |       |       |                 |

**Model Statistics:**  $R^2 = 0.348$ , Adjusted  $R^2 = 0.340$ ,  $F(6, 491) = 43.61$ ,  $p < 0.001$

**Model Assumptions:** VIF range: 1.12-2.34 (all  $< 5$ ); Shapiro-Wilk  $W = 0.993$ ,  $p = 0.089$ ; Breusch-Pagan  $\chi^2 = 3.42$ ,  $p = 0.754$

**Model 2: Hierarchical Regression Testing Moderation by Socioeconomic Status**

| Block/Predictor              | R <sup>2</sup> | ΔR <sup>2</sup> | F-change | β (final model) | p-value |
|------------------------------|----------------|-----------------|----------|-----------------|---------|
| <b>Block 1: Main Effects</b> | 0.352          | 0.352           | 44.18*** |                 | < 0.001 |
| Digital Persona Investment   |                |                 |          | 0.441           | < 0.001 |
| Socioeconomic Status (SES)   |                |                 |          | -0.091          | 0.031   |
| Covariates                   |                |                 |          | varies          | varies  |
| <b>Block 2: Interaction</b>  | 0.371          | 0.019           | 14.72*** |                 | < 0.001 |
| DPIS × SES                   |                |                 |          | -0.142          | < 0.001 |

**Simple Slopes Analysis (DPIS predicting DASS-21):**

- Low SES (-1 SD):  $\beta = 0.583$ ,  $t = 8.94$ ,  $p < 0.001$
- Medium SES (Mean):  $\beta = 0.441$ ,  $t = 9.75$ ,  $p < 0.001$
- High SES (+1 SD):  $\beta = 0.299$ ,  $t = 4.86$ ,  $p < 0.001$

**Model 3: Hierarchical Regression Testing Moderation by Social Support and Digital Literacy**

| Moderator                        | R <sup>2</sup> | ΔR <sup>2</sup> | F-change | Interaction β | p-value | Cohen's f <sup>2</sup> |
|----------------------------------|----------------|-----------------|----------|---------------|---------|------------------------|
| <b>Social Support (MSPSS)</b>    |                |                 |          |               |         |                        |
| Block 1: Main Effects            | 0.387          | 0.387           | 51.32*** |               | < 0.001 |                        |
| Block 2: DPIS × MSPSS            | 0.412          | 0.025           | 20.83*** | -0.164        | < 0.001 | 0.043                  |
| <b>Digital Literacy</b>          |                |                 |          |               |         |                        |
| Block 1: Main Effects            | 0.361          | 0.361           | 45.87*** |               | < 0.001 |                        |
| Block 2: DPIS × Digital Literacy | 0.378          | 0.017           | 13.34*** | -0.131        | < 0.001 | 0.027                  |

**Model 4: Mediation Analysis - Self-Esteem as Mediator (PROCESS Model 4)**

| Pathway                   | Effect | SE    | 95% CI           | p-value |
|---------------------------|--------|-------|------------------|---------|
| Total Effect (c)          | 0.344  | 0.032 | [0.281, 0.407]   | < 0.001 |
| Direct Effect (c')        | 0.213  | 0.030 | [0.154, 0.272]   | < 0.001 |
| Indirect Effect (a×b)     | 0.131  | 0.019 | [0.096, 0.170]   | —       |
| DPIS → Self-Esteem (a)    | -0.134 | 0.016 | [-0.166, -0.102] | < 0.001 |
| Self-Esteem → DASS-21 (b) | -0.978 | 0.089 | [-1.153, -0.803] | < 0.001 |

**Proportion Mediated:** 38.1% (Indirect/Total effect ratio)

\*Note: \*\* $p < 0.001$ ; Bootstrap confidence intervals based on 5,000 iterations

The multiple linear regression analysis (Model 1) demonstrated that digital persona investment was the strongest predictor of overall psychological distress, even after controlling for demographic variables and social media usage

patterns. The standardized regression coefficient ( $\beta = 0.459, p < 0.001$ ) indicated that for every one standard deviation increase in DPIS scores, DASS-21 scores increased by 0.459 standard deviations, representing a large effect. The model explained 34.8% of variance in psychological distress ( $R^2 = 0.348, F(6, 491) = 43.61, p < 0.001$ ), with DPIS contributing substantially to this explanatory power. Beyond digital persona investment, female gender ( $\beta = 0.112, p = 0.009$ ) and greater daily social media usage ( $\beta = 0.147, p = 0.001$ ) emerged as significant independent predictors of elevated distress, while age, education level, and socioeconomic status showed non-significant relationships once other variables were controlled. The large standardized coefficient for DPIS compared to other predictors underscored that digital persona construction behaviors represented a more potent risk factor for psychological distress than general social media exposure time, suggesting that the quality and psychological investment in digital self-presentation mattered more than simple usage duration. All regression assumptions were satisfied, with variance inflation factors ranging from 1.12 to 2.34 (all well below the threshold of 5), indicating no problematic multicollinearity, and the Shapiro-Wilk test ( $W = 0.993, p = 0.089$ ) and Breusch-Pagan test ( $\chi^2 = 3.42, p = 0.754$ ) confirming normality of residuals and homoscedasticity respectively.

The hierarchical regression analyses testing moderation effects provided strong support for Hypotheses 2 and 3. For socioeconomic status (Model 2), the interaction term between DPIS and SES contributed significant incremental variance ( $\Delta R^2 = 0.019, F\text{-change} = 14.72, p < 0.001$ ), with a standardized interaction coefficient of  $\beta = -0.142$  ( $p < 0.001$ ) and a small but meaningful effect size (Cohen's  $f^2 = 0.030$ ). The simple slopes analysis revealed that the relationship between digital persona investment and psychological distress was strongest among participants from low socioeconomic backgrounds ( $\beta = 0.583$ ) compared to middle ( $\beta = 0.441$ ) and high SES groups ( $\beta = 0.299$ ), with all slopes remaining statistically significant but differing substantially in magnitude. This pattern confirmed that economic vulnerability amplified the psychological costs of maintaining aspirational digital personas, likely due to the greater discrepancy between lived realities and curated online presentations among lower-SES youth. For social support (Model 3), the DPIS  $\times$  MSPSS interaction was highly significant ( $\Delta R^2 = 0.025, F\text{-change} = 20.83, p < 0.001, \beta = -0.164, f^2 = 0.043$ ), indicating that stronger social support networks attenuated the harmful association between digital persona construction and distress. Similarly, digital literacy moderated the relationship ( $\Delta R^2 = 0.017, F\text{-change} = 13.34, p < 0.001, \beta = -0.131, f^2 = 0.027$ ), such that participants with higher critical engagement skills experienced weaker associations between persona investment and psychological symptoms, suggesting protective effects of media literacy education.

The mediation analysis (Model 4) revealed that self-esteem partially mediated the relationship between digital persona investment and psychological distress, providing insights into underlying mechanisms. The total effect of DPIS on DASS-21 ( $c = 0.344, p < 0.001$ ) decomposed into a significant direct effect ( $c' = 0.213, p < 0.001$ ) and a significant indirect effect through self-esteem ( $a \times b = 0.131, 95\% \text{ CI } [0.096, 0.170]$ ), with the bootstrap confidence interval excluding zero and confirming statistical significance. Path analysis showed that greater digital persona investment predicted lower self-esteem ( $a = -0.134, p < 0.001$ ), which in turn predicted higher psychological distress ( $b = -0.978, p < 0.001$ ). The proportion mediated calculation indicated that 38.1% of the total effect operated through diminished self-esteem, suggesting that while self-esteem was an important mechanism, other pathways (constituting 61.9% of the effect) also contributed to the relationship between digital persona construction and distress. These additional

pathways might include social comparison processes, authenticity conflicts, validation-seeking behaviors, or temporal opportunity costs. The partial rather than complete mediation pattern was theoretically consistent with the multifaceted nature of psychological distress arising from digital persona maintenance, indicating that interventions targeting self-esteem alone would be insufficient and that comprehensive approaches addressing multiple mechanisms would be necessary to effectively reduce the psychological burden associated with aesthetic digital persona construction among Ugandan Generation Z.

### Conclusion

This study successfully examined the relationship between aesthetic digital persona construction and psychological distress among Generation Z in Uganda, revealing significant and concerning patterns that align with the research objectives. The findings demonstrate that Ugandan Gen Z engages extensively in aesthetic digital persona construction, with 48.4% of participants showing high investment in curating idealized online identities characterized by substantial time investment, appearance concerns, online-offline discrepancy, and photo editing behaviors across platforms including WhatsApp Status (89.4%), Instagram (82.7%), and TikTok (77.7%). The study confirmed a strong positive correlation ( $r = 0.52$ ,  $p < 0.001$ ) between digital persona investment and psychological distress, with participants heavily invested in digital persona curation reporting significantly elevated levels of depression, anxiety, and stress compared to their low-investment peers, supporting Hypothesis 1. Multiple regression analysis revealed that digital persona construction was the strongest predictor of psychological distress ( $\beta = 0.459$ ,  $p < 0.001$ ), explaining 34.8% of variance even after controlling for demographic factors and social media usage time. Critical moderating factors were identified, with socioeconomic status significantly amplifying the relationship—low-SES youth experienced the strongest association between digital persona maintenance and distress ( $\beta = 0.583$ ) compared to high-SES peers ( $\beta = 0.299$ ), confirming Hypothesis 2 and highlighting how economic vulnerability intensifies the psychological costs of maintaining aspirational digital facades. Furthermore, social support networks and digital literacy emerged as significant protective factors that attenuated the harmful effects of digital persona construction on mental health, validating Hypothesis 3. Mediation analysis revealed that diminished self-esteem accounted for 38.1% of the relationship between digital persona investment and psychological distress, suggesting multiple pathways through which aesthetic digital performance translates into psychological harm. Collectively, these findings indicate that Uganda's Generation Z faces a genuine mental health crisis driven by the tension between authentic lived experiences and curated digital identities, with the phenomenon disproportionately affecting economically vulnerable youth who lack strong support systems and digital literacy skills, thereby confirming the looming social crisis posited in the research framework and underscoring the urgent need for targeted interventions.

### Recommendations

**Implement Comprehensive Digital Literacy and Mental Health Programs in Educational Institutions:** Given that digital literacy emerged as a significant protective factor that weakened the association between digital persona construction and psychological distress, Uganda's Ministry of Education and Sports should mandate curriculum integration of critical digital media literacy programs across secondary schools, tertiary institutions, and universities. These programs should specifically focus on developing students' critical thinking about curated online content,

understanding algorithmic curation mechanisms, recognizing social comparison traps, and cultivating authentic self-presentation skills.

**Strengthen Community-Based Social Support Networks and Peer Mentorship Programs:** The findings revealed that social support significantly moderated the harmful effects of digital persona construction on psychological wellbeing, suggesting that offline support systems serve as crucial buffers against digital-related distress. Government agencies, NGOs, and community organizations should prioritize establishing and strengthening youth-focused support networks through community centers, youth clubs, and peer mentorship programs that facilitate authentic interpersonal connections beyond digital spaces.

**Advocate for Platform-Level Interventions and Policy Reforms Addressing Digital Wellbeing:** Given that 71.5% of participants used social media for three or more hours daily across multiple platforms, and that the quality of digital engagement (persona investment) proved more harmful than usage duration alone, policymakers should collaborate with social media platforms operating in Uganda to implement user-protective features. These should include optional tools that limit photo editing capabilities, provide periodic reminders about curated versus authentic content, offer "reality check" features that display unedited comparison images, and create algorithm transparency mechanisms that help users understand how content curation affects their perceptions.

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