

Design and Validation of the Digital Emotional Self-Disclosure Scale in Iranian Adolescent Girls: Psychometric Evidence from Exploratory and Confirmatory Factor Analyses

Tannaz Zarrinkhat¹, Zeinab Rabbani², Mahshid Jahtalab Ziabari³,

Mohammadmahdi Moghaddamnia⁴

1. Department of Psychology, Sav.C., Islamic Azad University, Saveh, Iran

2. Department of educational psychology, Isl.C., Islamic Azad University, Islamshahr, Iran, zrabbani@iaui.ir

3. Department of Clinical Psychology, Isl.C., Islamic Azad University, Islamshahr, Iran

4. Department of Educational Psychology, Isl.C., Islamic Azad University, Islamshahr, Iran

Article Info

Article type:

Research Article

Article history:

Received 22 Jan. 2026

Received in revised form 19

Mar. 2026

Accepted 5 Apr. 2026

Published online 01 Sep. 2026

Keywords:

Digital emotional self-disclosure,
Scale validation,
Factor analysis,
Psychometrics,
Iranian adolescents,
Social networks

ABSTRACT

Objective: This study aimed to design and validate the Digital Emotional Self-Disclosure Scale (DESDS) for Iranian adolescent girls.

Methods: A descriptive–correlational study with a psychometric approach was conducted among 400 adolescent girls aged 13–19 years in Tehran, selected through multistage cluster sampling. A researcher-developed 42-item scale was administered, and its psychometric properties were evaluated using exploratory factor analysis and partial least squares structural equation modeling (PLS-SEM) in SmartPLS 3. Reliability and construct validity were assessed through Cronbach's alpha, composite reliability, convergent validity, discriminant validity, and model fit indices. Criterion validity was preliminarily examined by investigating the associations of digital emotional self-disclosure with emotional reactivity and impulsive behaviors.

Results: The final scale comprised 28 items across six factors: emotional expression methods, willingness to self-disclose, emotional experience, emotional consequences, perceived trust and security, and receipt of social support. The measurement model demonstrated satisfactory psychometric properties, with Cronbach's alpha ranging from 0.757 to 0.889, composite reliability values above 0.80, and acceptable convergent and discriminant validity. The model also showed good fit (SRMR = 0.061). The relationships between digital emotional self-disclosure and emotional reactivity and impulsive behaviors were not statistically significant.

Conclusions: The Digital Emotional Self-Disclosure Scale is a reliable and culturally appropriate instrument for assessing digital emotional self-disclosure among Iranian adolescent girls. Its validated six-factor structure provides a useful foundation for future research in digital psychology, while the non-significant criterion relationships suggest that the construct may be influenced by more complex or mediating psychological processes.

Cite this article: Zarrinkhat, T., Rabbani, Z., Jahtalab Ziabari, M. & Moghaddamnia, M. (2026). Design and validation of the digital emotional self-disclosure scale in Iranian adolescent girls: psychometric evidence from exploratory and confirmatory factor analyses. *Iranian Journal of Educational Research*, 5 (3), 1-17.

. DOI: <https://doi.org/>



© The Author(s).

DOI: <https://doi.org/>

Publisher: University of Hormozgan.

Introduction

The rapid expansion of communication technologies and adolescents' increasing reliance on social networking platforms have fundamentally transformed the ways in which emotional interactions occur. One of the most prominent manifestations of this transformation is the emergence of a new form of emotional expression in digital environments, referred to as digital emotional self-disclosure. This construct describes the voluntary expression of emotions, feelings, and personal experiences through online platforms such as Instagram, WhatsApp, and Telegram (Barak & Gluck-Ofri, 2007).

In psychology, emotional self-disclosure has long been recognized as a key factor influencing mental health, emotion regulation, and interpersonal relationships (Derlega et al., 2008). Expressing emotions, particularly within close relationships, facilitates emotional release, enhances empathy, and promotes perceived social support (Greene, 2009). However, the migration of self-disclosure from face-to-face interactions to digital environments has created both new opportunities and significant challenges. Characteristics of online communication—including relative anonymity, asynchronous interaction, the absence of many nonverbal cues, and the rapid pace of communication—have fundamentally altered the nature of self-disclosure compared with its traditional form (Joinson, 2001). Individuals often disclose emotions more intensely and more readily in online settings (Buechel & Berger, 2012); nevertheless, such disclosure may also result in misunderstandings, emotional vulnerability, or subsequent regret (Rains & Brunner, 2015).

Adolescence represents a particularly important developmental period in which digital emotional self-disclosure becomes highly salient. As adolescents undergo identity formation and develop emotional regulation capacities, they are especially sensitive to both the benefits and risks associated with online emotional expression. Developmental characteristics such as a strong need for social belonging, identity exploration, and heightened emotional vulnerability make adolescents more susceptible to the psychological consequences of digital self-disclosure than other age groups (Valkenburg & Peter, 2013). Recent research has demonstrated that the quality and style of adolescents' online emotional self-disclosure are associated with mental health, interpersonal relationship quality, and emotional well-being (Luo & Hancock, 2020).

Despite the growing importance of this phenomenon, most existing self-disclosure instruments have been developed for face-to-face interactions and traditional interpersonal relationships.

Consequently, they fail to capture the unique characteristics of emotional expression within digital environments. Moreover, no culturally adapted and psychometrically validated instrument has been reported for assessing digital emotional self-disclosure among Iranian adolescents. This methodological gap has substantially limited research on the digital mental health of Iranian youth. To provide preliminary evidence of criterion-related validity, the present study also examined the associations between digital emotional self-disclosure and two theoretically relevant constructs: emotional reactivity and impulsive behaviors. These variables were selected because previous literature suggests that emotional self-disclosure is closely related to the intensity and persistence of emotional experiences (Rimé, 2009), while impulsive behaviors have been linked to unregulated emotional expression and risky online behaviors (Rains & Brunner, 2015).

The present study contributes to the literature in several important ways. First, it addresses the absence of a native, multidimensional instrument for measuring digital emotional self-disclosure among Iranian adolescents by developing and conducting an initial psychometric validation of a culturally appropriate scale. Second, it is among the first studies to conceptualize and operationalize digital emotional self-disclosure specifically within the context of social media use and online interactions among Iranian adolescents. Third, by incorporating multiple dimensions of emotional experience, emotional expression, perceived trust and security, social support, and the consequences of disclosure, the proposed scale provides a more comprehensive assessment of this construct. Finally, the findings offer a foundation for future research in digital psychology, adolescent mental health, and online behavioral studies within the Iranian cultural context. Nevertheless, the present investigation should be regarded as an initial exploratory validation study, with its primary purpose being instrument development and psychometric evaluation. Accordingly, the central research question of this study was: Does the Digital Emotional Self-Disclosure Scale demonstrate acceptable psychometric properties for use among Iranian adolescent girls?

Material and Methods

This study employed a quantitative, descriptive–correlational design with a psychometric approach. The primary objective was to develop and conduct the initial validation of the Digital Emotional Self-Disclosure Scale (DESDS) and to examine its psychometric properties among

Iranian adolescent girls. In addition, preliminary evidence of criterion-related validity was obtained by investigating the relationships between DESDS scores, emotional reactivity, and impulsive behaviors.

Participants and sampling

The target population consisted of all female students aged 13–18 years in Tehran, Iran, who were active users of social media platforms. Nineteen-year-old students who remained enrolled in secondary school due to academic interruption or grade repetition were also included in the population.

A sample of 400 participants was determined based on recommendations for factor analysis, allowing for potential attrition. Following the guideline of a minimum ratio of 10 participants per item (Hair et al., 2019), the initial 42-item instrument required an adequate sample size, making 400 participants appropriate for psychometric evaluation.

Participants were selected using a multistage cluster sampling procedure. First, several secondary schools were randomly selected from different districts of Tehran. Next, classes within each school were randomly chosen, and finally, all eligible students in the selected classes were invited to participate.

Within the PLS-SEM framework, the measurement model was evaluated through factor loadings, composite reliability, convergent validity, and discriminant validity, which serve as the functional equivalent of confirmatory factor analysis in this methodological approach (Hair et al., 2019).

Instruments

Digital Emotional Self-Disclosure Scale (DESDS): The Digital Emotional Self-Disclosure Scale was developed by the researchers to assess adolescents' expression and disclosure of emotions, feelings, and emotional experiences in social media and digital environments. Scale development was conducted in several stages. Initially, an item pool was generated through a comprehensive review of the theoretical and empirical literature on online emotional self-disclosure. Subsequently, the items were reviewed by experts in psychology and educational sciences to establish content validity.

For quantitative content validation, the preliminary questionnaire was evaluated by 10 experts in psychology and psychometrics. The Content Validity Ratio (CVR) for all retained items exceeded

Lawshe's critical value of 0.62, and the Content Validity Index (CVI) for the overall scale was greater than 0.79, indicating satisfactory content validity (Polit & Beck, 2006).

The initial version contained 42 items rated on a 5-point Likert scale ranging from 1 (Strongly disagree) to 5 (Strongly agree). Following exploratory factor analysis and measurement model evaluation, the final version consisted of 28 items representing six dimensions.

Emotional Reactivity Scale (ERS): Emotional reactivity was measured using the Emotional Reactivity Scale (ERS) developed by Nock et al. (2008). The ERS is a 21-item self-report instrument assessing three dimensions: emotional sensitivity, emotional intensity, and emotional persistence. The original study reported excellent internal consistency (Cronbach's $\alpha = 0.95$). In an Iranian validation study by Shanjani et al. (2022), the overall Cronbach's alpha was 0.918, supporting its reliability in the Iranian population.

Barratt Impulsiveness Scale–11 (BIS-11): Impulsive behavior was assessed using the Barratt Impulsiveness Scale, Version 11 (BIS-11) (Patton et al., 1995). This 30-item self-report measure uses a 4-point Likert scale ranging from 1 (Never) to 4 (Always) and evaluates three components: non-planning impulsiveness, motor impulsiveness, and cognitive impulsiveness. An Iranian validation study reported an overall Cronbach's alpha of 0.81, indicating acceptable reliability for use in Iranian samples (Javid et al., 2012).

Results

Data analysis was conducted in two stages. First, exploratory factor analysis (EFA) was performed on the initial 42 items using principal axis factoring with oblimin rotation. Prior to EFA, sampling adequacy was assessed using the Kaiser–Meyer–Olkin (KMO) index and Bartlett's test of sphericity.

Second, the measurement and structural models were evaluated using Partial Least Squares Structural Equation Modeling (PLS-SEM) in SmartPLS version 3.

The use of PLS-SEM was justified for three reasons: (a) the study had an exploratory–confirmatory objective, for which PLS-SEM is particularly appropriate (Hair et al., 2019); (b) the method is relatively robust to violations of multivariate normality; and (c) it enables the simultaneous evaluation of measurement and structural models.

The measurement model was assessed using Cronbach's alpha and composite reliability (CR) for internal consistency, average variance extracted (AVE) for convergent validity, and both the HTMT ratio and Fornell–Larcker criterion for discriminant validity. Overall model fit was evaluated using the SRMR, NFI, and Chi-square indices. The significance of structural paths was tested using bootstrapping with 5,000 resamples, with the significance level set at $\alpha = .05$.

Because both EFA and confirmatory measurement model evaluation were conducted on the same sample, the factorial structure should be interpreted with caution and validated in independent samples in future research.

Demographic Characteristics

The sample consisted of 400 Iranian adolescent girls. The largest age group was 15–16 years ($n = 148$, 37.0%), followed by 17–18 years (25.5%). Additionally, 54 participants (13.5%) were 19 years old due to academic interruption or grade repetition. This distribution indicates adequate representation across the adolescent age range.

Descriptive Statistics

Table 1 presents the descriptive statistics for the study variables.

Table 1. Descriptive statistics of the study variables

Variable	N	Minimum	Maximum	Mean	SD
Digital Emotional Self-Disclosure	400	1.24	4.76	3.000	0.642
Emotional Reactivity	400	2.05	4.05	3.115	0.318
Impulsive Behaviors	400	1.47	4.50	2.991	0.578

The mean score of digital emotional self-disclosure indicated a moderate level of the construct. Emotional reactivity had the highest mean ($M = 3.115$), whereas impulsive behaviors showed the lowest mean ($M = 2.991$). The greatest variability was observed for digital emotional self-disclosure ($SD = 0.642$), while emotional reactivity demonstrated the lowest dispersion ($SD = 0.318$), suggesting greater homogeneity of responses.

Exploratory Factor Analysis

Prior to measurement model evaluation, EFA was conducted on the initial 42-item scale. The results demonstrated excellent sampling adequacy ($KMO = 0.888$), and Bartlett's test of sphericity was statistically significant ($p < .001$), confirming the suitability of the data for factor analysis.

Six factors with eigenvalues greater than 1 were extracted. Following the removal of 14 items due to low factor loadings (< 0.40) or cross-loadings, 28 items were retained for evaluation within the PLS-SEM measurement model.

Measurement Model: Factor Loadings

The final measurement model consisted of six latent constructs. All retained items exhibited acceptable standardized factor loadings, as presented in Table 2.

Table 2. Standardized factor loadings of the final six-factor model

Construct	Item	Loading
Methods of Emotional Expression in Digital Environments	Q20	0.847
	Q21	0.599
	Q22	0.904
	Q23	0.715
Willingness for Online Emotional Self-Disclosure	Q2	0.563
	Q3	0.638
	Q4	0.819
	Q5	0.562
	Q6	0.667
	Q7	0.712
Seeking Social Approval and Feedback	Q14	0.692
	Q15	0.826
	Q16	0.800
	Q17	0.796
	Q18	0.707
	Q19	0.717
Emotional Consequences of Digital Self-Disclosure	Q34	0.566
	Q35	0.607
	Q36	0.619
	Q37	0.904
	Q38	0.821
Sensitivity to Others' Evaluation and Reactions	Q30	0.816
	Q31	0.884
	Q32	0.692
	Q33	0.768
Social Feedback and Emotional Support	Q39	0.835
	Q40	0.868
	Q41	0.737

All retained indicators loaded satisfactorily on their intended constructs, supporting the six-factor structure of the Digital Emotional Self-Disclosure Scale.

Reliability and Convergent Validity

Internal consistency and convergent validity were assessed using Cronbach's alpha, composite reliability (CR), and average variance extracted (AVE).

Table 3. Reliability and convergent validity of the constructs

Construct	Cronbach's α	CR	AVE
Methods of Emotional Expression	0.844	0.855	0.601
Willingness for Online Self-Disclosure	0.889	0.870	0.496
Seeking Social Approval and Feedback	0.869	0.890	0.575
Emotional Consequences	0.826	0.835	0.513
Sensitivity to Others' Evaluation	0.816	0.871	0.629
Social Feedback and Emotional Support	0.757	0.856	0.665

Cronbach's alpha coefficients ranged from 0.757 to 0.889, exceeding the recommended threshold of 0.70. Composite reliability values ranged from 0.835 to 0.890, indicating satisfactory internal consistency. AVE values exceeded 0.50 for five of the six constructs. The AVE for Willingness for Online Emotional Self-Disclosure was 0.496, slightly below the conventional cutoff; however, given its strong composite reliability (0.870) and Cronbach's alpha (0.889), its convergent validity was considered marginally acceptable (Hair et al., 2019).

Discriminant Validity

Discriminant validity was evaluated using both the HTMT ratio and the Fornell–Larcker criterion.

Table 4. HTMT ratios among latent constructs

Construct	1	2	3	4	5	6
1. Methods of Emotional Expression	—	0.253	0.258	0.280	0.241	0.220
2. Willingness for Self-Disclosure		—	0.295	0.294	0.261	0.192
3. Seeking Social Approval			—	0.266	0.264	0.319
4. Emotional Consequences				—	0.261	0.326
5. Sensitivity to Evaluation					—	0.247
6. Social Feedback & Support						—

All HTMT values ranged from 0.192 to 0.326, well below the recommended threshold of 0.85, confirming satisfactory discriminant validity (Henseler et al., 2015).

Table 5. Discriminant validity based on the Fornell–Larcker criterion

Construct	1	2	3	4	5	6
1. Methods of Emotional Expression	0.775					
2. Willingness for Self-Disclosure	0.169	0.704				
3. Seeking Social Approval	0.219	0.200	0.758			
4. Emotional Consequences	0.250	0.256	0.199	0.716		
5. Sensitivity to Evaluation	0.168	0.176	0.204	0.170	0.793	
6. Social Feedback & Support	0.165	0.152	0.239	0.227	0.202	0.816

Note. Diagonal values (bold) represent the square root of AVE.

For every construct, the square root of AVE exceeded its correlations with the remaining constructs, providing further evidence of adequate discriminant validity.

Model Fit Indices

The overall model fit statistics are presented in Table 6.

Table 6. Model fit indices

Index	Value	Recommended value	Interpretation
SRMR	0.061	< 0.08	Good fit
NFI	0.762	> 0.90	Acceptable for PLS-SEM
Chi-square	1174.904	—	Sensitive to sample size

The SRMR value of 0.061 indicated a satisfactory overall model fit. Although the NFI (0.762) was below the conventional cutoff of 0.90, this index is known to be sensitive to model complexity in PLS-SEM; therefore, SRMR is generally regarded as the primary indicator of model fit in this framework (Hair et al., 2019). The chi-square statistic was not used as a decisive criterion because of its sensitivity to large sample sizes.

Preliminary Evidence of Criterion-Related Validity

To obtain preliminary evidence of criterion-related validity, structural paths were estimated between digital emotional self-disclosure and emotional reactivity as well as impulsive behaviors.

Table 7. Preliminary criterion-related validity of the Digital Emotional Self-Disclosure Scale

Structural path	β	t	p	95% CI	f ²	Result
Self-disclosure → Impulsive behaviors	0.157	0.767	0.443	[-0.316, 0.316]	0.025	Not significant
Self-disclosure → Emotional reactivity	0.202	0.860	0.390	[-0.338, 0.364]	0.042	Not significant

Neither structural path reached statistical significance. These findings should be interpreted within the context of initial scale development and should not be considered evidence of the absence of relationships between the constructs. Several explanations are plausible. First, the associations between digital emotional self-disclosure and emotional or behavioral outcomes may be indirect, operating through mediating variables. Second, simultaneously examining both adaptive and maladaptive criterion variables may attenuate linear associations. Third, because the present instrument represents an initial developmental measure, strong predictive validity is not necessarily expected at this stage (DeVellis, 2016). Therefore, these findings should be regarded as preliminary exploratory evidence of criterion-related validity.

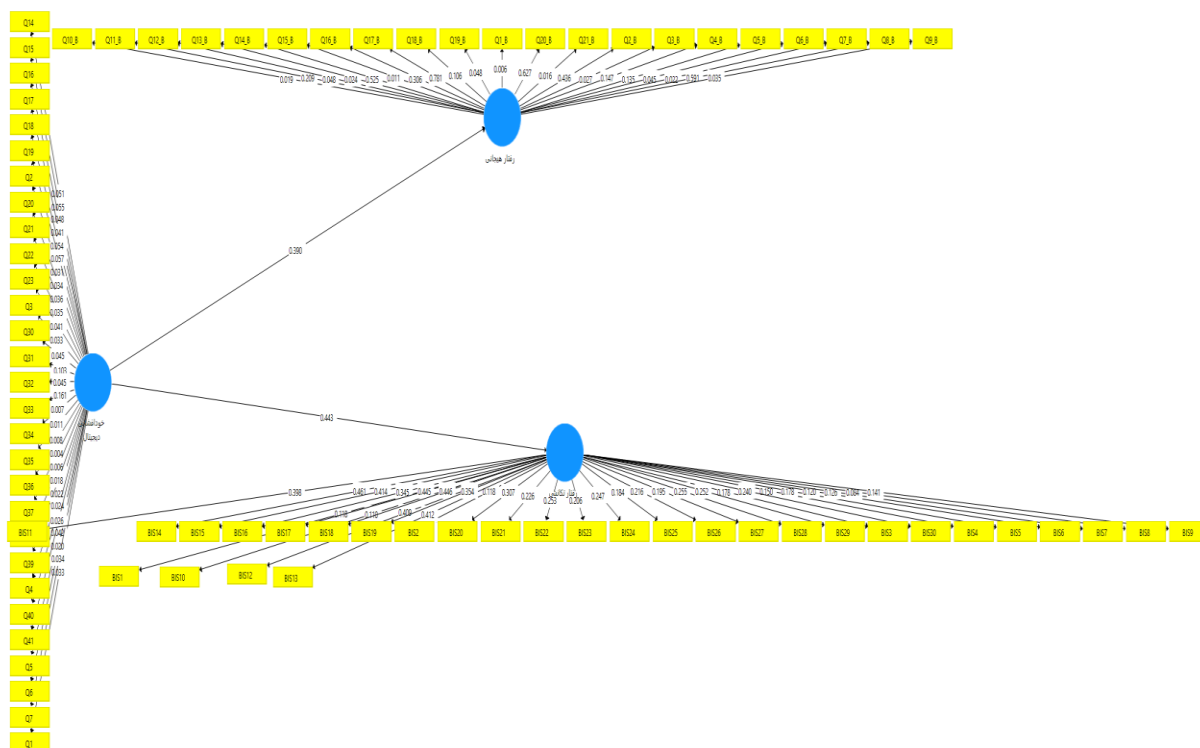


Figure 1. Structural model with standardized path coefficients and significance values

Discussion

The findings of the present study are discussed across three main areas: the factor structure of the scale, its psychometric properties, and preliminary evidence of criterion-related validity. The findings from the exploratory and confirmatory factor analyses indicated that digital emotional self-disclosure is a multidimensional construct that can be represented by six distinct but related dimensions. This finding is consistent with existing theoretical perspectives on online self-disclosure. Previous researchers have likewise demonstrated that self-disclosure in digital environments is not a unidimensional phenomenon but encompasses a range of behavioral, emotional, and interpersonal dimensions (Luo & Hancock, 2020; Rains & Brunner, 2015).

The first dimension, Methods and Tools of Emotional Expression in Digital Environments, is consistent with research showing that users employ various digital tools, such as emojis, stickers, and text, to express their emotions (Buechel & Berger, 2012). The second dimension, Willingness for Online Emotional Self-Disclosure, is consistent with the concept of the online disinhibition

effect proposed by Joinson (2001), which suggests that individuals may be more willing to disclose personal and emotional information in online environments.

The third dimension, Seeking Social Approval and Feedback, reflects the social and interpersonal motivations underlying digital emotional self-disclosure. The findings suggest that adolescents disclose their emotions online not merely to express their feelings but also to obtain attention, approval, and feedback from others. This finding is consistent with Rimé's (2009) social sharing of emotion theory, which emphasizes the interpersonal functions of emotional sharing. In digital environments, these interpersonal functions may be facilitated through immediate forms of feedback, such as likes, comments, and shares.

The fourth through sixth dimensions—Emotional Consequences of Digital Self-Disclosure, Sensitivity to Evaluation and Reactions, and Social Feedback and Emotional Support—are also consistent with Rimé's (2009) theoretical framework concerning the social functions of emotional sharing. Together, these dimensions suggest that digital emotional self-disclosure involves not only the expression of emotional experiences but also expectations concerning others' reactions, interpersonal feedback, perceived safety, and the potential consequences of disclosure.

The psychometric evaluation demonstrated that the Digital Emotional Self-Disclosure Scale possesses satisfactory internal consistency, convergent validity, and discriminant validity. Cronbach's alpha coefficients ranged from 0.757 to 0.889, while composite reliability values ranged from 0.835 to 0.890, meeting commonly accepted psychometric standards (Hair et al., 2019). These levels of reliability are comparable to those reported for related measures of online self-disclosure. With respect to discriminant validity, all HTMT values were below the recommended threshold of 0.85, indicating adequate conceptual distinctiveness among the constructs (Henseler et al., 2015). This finding is particularly important because it suggests that, although the six dimensions are conceptually related, they represent distinguishable aspects of digital emotional self-disclosure.

The only marginal finding concerned the Willingness for Online Emotional Self-Disclosure construct, for which the AVE was 0.496, slightly below the conventional threshold of 0.50. Nevertheless, given the satisfactory composite reliability (0.870) and Cronbach's alpha (0.889) for this construct, its convergent validity can be considered marginally acceptable. Future research should consider reviewing and refining the items representing this dimension to improve its AVE.

The SRMR value of 0.061 also supported the satisfactory fit of the measurement model. Although the NFI value (0.762) was below the ideal threshold, lower NFI values can occur in PLS-SEM models, particularly when the model is relatively complex, and this value alone should not be interpreted as evidence of poor model fit (Hair et al., 2019).

The structural model indicated that the direct relationships between digital emotional self-disclosure and emotional reactivity and impulsive behaviors were not statistically significant. Although this finding may initially appear inconsistent with some theoretical expectations (Rimé, 2009; Rains & Brunner, 2015), it may reflect an important conceptual distinction.

More specifically, digital emotional self-disclosure among adolescents may represent a phenomenon that extends beyond merely impulsive or reactive behavior. Rather, it may constitute a purposeful communicative act within social networking environments, primarily driven by interpersonal motivations such as seeking approval, obtaining social support, and managing social image.

Evidence for this interpretation can be found in the factor structure identified in the present study. Specifically, Seeking Social Approval and Feedback and Sensitivity to Evaluation and Reactions emerged as important dimensions, with relatively strong factor loadings. This pattern suggests that digital emotional self-disclosure may be more strongly shaped by social norms and interpersonal feedback in online environments than by an individual's emotional or personality characteristics alone.

Accordingly, the criterion variables selected in the present study, which primarily focused on intrapersonal characteristics, may not have been sufficient to adequately establish the criterion-related validity of this construct. Future research should examine the criterion validity of the scale using more interpersonal and socially oriented variables, such as online relationship quality, perceived social support in digital environments, and regret following self-disclosure.

Conclusion

The present study aimed to develop and conduct an initial validation of the Digital Emotional Self-Disclosure Scale among Iranian adolescent girls. The primary contribution of the study was the development of a culturally adapted, multidimensional instrument for assessing this construct within social media and digital environments. The psychometric findings indicated that the final 28-item, six-factor scale demonstrated satisfactory internal consistency, with Cronbach's alpha

coefficients ranging from 0.757 to 0.889, as well as acceptable convergent and discriminant validity.

The SRMR value of 0.061 further supported the satisfactory fit of the measurement model. Overall, the psychometric evidence suggests that the scale can be considered a promising initial instrument for assessing digital emotional self-disclosure among Iranian adolescents.

The examination of preliminary criterion-related validity did not support significant direct relationships between digital emotional self-disclosure and emotional reactivity or impulsivity. When considered alongside the identified factor structure, these findings suggest that digital emotional self-disclosure may be better conceptualized as a social-communicative phenomenon characterized by interpersonal motivations and feedback processes, rather than solely as an intrapersonal emotional-behavioral phenomenon. Therefore, future studies should prioritize criterion variables with a stronger interpersonal orientation, such as online relationship quality and perceived social support.

Practical Implications

The findings have several practical implications. First, the developed scale can be used by psychologists and school counselors to assess patterns of digital emotional self-disclosure among adolescents and to identify individuals who may require further support or intervention.

Second, the instrument may be incorporated into educational programs addressing digital literacy and online communication skills, helping adolescents develop greater awareness of how they express and disclose emotions in digital environments.

Third, mental health professionals may use the scale as part of clinical assessments to better understand the digital communication patterns of adolescent clients. Such assessment may help practitioners identify potentially problematic patterns of emotional disclosure and develop more targeted interventions.

Recommendations for Future Research

Several directions for future research can be proposed. First, the factor structure of the scale should be examined in independent and more diverse samples, including adolescent boys, different age groups, and adolescents from other cities and regions of Iran.

Second, longitudinal research should be conducted to examine the temporal stability of the factor structure and provide greater insight into the developmental stability of digital emotional self-disclosure.

Third, future studies should incorporate potential mediating variables, such as emotion regulation, online social relationship quality, and personality characteristics, to investigate the more complex mechanisms underlying digital emotional self-disclosure.

Fourth, the items associated with the Willingness for Online Emotional Self-Disclosure dimension should be reviewed and refined to improve its AVE.

Fifth, cross-cultural validation of the scale through comparisons with samples from non-Iranian cultural contexts could contribute to the theoretical development of the construct and help determine which aspects of digital emotional self-disclosure are culturally specific versus culturally universal.

Future research should also consider more sophisticated models incorporating mediating and moderating variables, particularly interpersonal variables such as perceived social support, online relationship quality, and social norms within social networking environments. Such research could provide a more comprehensive understanding of the antecedents and consequences of digital emotional self-disclosure among adolescents.

Limitations

Despite strengths such as the development and initial validation of a culturally adapted instrument and the use of an adequate sample size, several limitations should be considered when interpreting the findings.

First, and most importantly, EFA and the subsequent measurement-model evaluation were conducted using the same sample. Standard procedures for scale development generally recommend dividing the sample into independent subsamples, with one subsample used for EFA and another for CFA. Conducting both analyses on the same sample may result in model overfitting and potentially inflated evidence for the factorial structure. Therefore, replication of the six-factor structure in independent samples should be a priority for future research.

Second, criterion-related validity was examined using the same sample on which the instrument was developed and validated. This approach may produce optimistic estimates of relationships and

therefore requires caution when interpreting the criterion-related validity findings. Future studies should evaluate criterion-related validity using independent samples.

Third, the sample consisted exclusively of adolescent girls from Tehran. Consequently, generalization of the findings to boys, other age groups, and adolescents living in different geographical and cultural regions should be undertaken cautiously. Replication in more diverse samples is necessary to examine the stability and generalizability of the factor structure.

Fourth, the study employed a cross-sectional design, which precludes conclusions regarding causal relationships or the temporal ordering of variables. Longitudinal studies could provide greater insight into the direction and developmental dynamics of the relationships between digital emotional self-disclosure and its emotional and behavioral correlates.

Fifth, the data were collected using self-report measures, which are potentially subject to biases such as social desirability and recall errors. Future research could improve measurement accuracy by using multimethod approaches that combine self-report data with behavioral indicators or reports from parents and teachers.

Furthermore, because all study variables were assessed through self-report measures at a single time point, the possibility of common method bias cannot be excluded. The Harman single-factor test was not conducted in the present study because of practical limitations, which represents an additional limitation in interpreting the relationships among the variables. Future research could address this concern through multimethod designs or by collecting data at different time points.

Sixth, the AVE for the Willingness for Online Emotional Self-Disclosure construct was slightly below the recommended threshold. Although the remaining reliability and validity indicators were within acceptable ranges, further revision and refinement of the items representing this construct are recommended.

Finally, the concept of digital emotional self-disclosure remains at an early stage of theoretical development. Its dimensions and manifestations may differ across cultural contexts, age groups, and digital communication platforms. Further theoretical development and cross-cultural validation of the construct therefore represent important directions for future research in digital psychology and adolescent mental health.

Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

Ethics statement

The studies involving human participants were reviewed and approved by the ethics committee of Islamic Azad University. The patients/participants provided their written informed consent to participate in this study.

Author contributions

All authors contributed to the study conception and design, material preparation, data collection, and analysis. All authors contributed to the article and approved the submitted version.

Funding

This study did not receive any financial support from governmental, private, or nonprofit organizations.

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

References

- Barak, A., & Gluck-Ofri, O. (2007). Degree and reciprocity of self-disclosure in online forums. *CyberPsychology & Behavior*, 10(3), 407-417.
- Buechel, E., & Berger, J. (2012). Facebook therapy? Why do people share their emotional experiences online? *Journal of Consumer Research*, 39(4), 739-753.
- Derlega, V. J., Winstead, B. A., & Greene, K. (2008). Self-disclosure and starting a close relationship. In S. Sprecher, A. Wenzel, & J. Harvey (Eds.), *Handbook of relationship initiation* (pp. 153-174). Psychology Press.
- DeVellis, R. F. (2016). *Scale development: Theory and applications* (4th ed.). Sage Publications.
- Greene, K. (2009). Self-disclosure in personal relationships. In S. W. Smith & S. R. Wilson (Eds.), *New directions in interpersonal communication* (pp. 87-112). Sage.
- Gross, J. J. (2015). Emotion regulation: Current status and future prospects. *Psychological Inquiry*, 26(1), 1-26.
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2-24 .

- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115-135.
- Javid, M., Mohammadi, N., & Rahimi, C. (2012). Psychometric properties of the Persian version of the Barratt Impulsiveness Scale, 11th edition. *Psychological Methods and Models*, 8(2), 23–34. [In Persian]
- Joinson, A. N. (2001). Self-disclosure in computer-mediated communication: The role of self-awareness and visual anonymity. *European Journal of Social Psychology*, 31(2), 177-192.
- Luo, M., & Hancock, J. T. (2020). Self-disclosure and social media: Motivations, mechanisms and psychological well-being. *Current Opinion in Psychology*, 31, 110-115.
- Nock, M. K., Wedig, M. M., Holmberg, E. B., & Hooley, J. M. (2008). The Emotion Reactivity Scale: Development, evaluation, and relation to self-injurious thoughts and behaviors. *Behavior Therapy*, 39(2), 107-116.
- Patton, J. H., Stanford, M. S., & Barratt, E. S. (1995). Factor structure of the Barratt Impulsiveness Scale. *Journal of Clinical Psychology*, 51(6), 768-774.
- Polit, D. F., & Beck, C. T. (2006). The content validity index: Are you sure you know what's being reported? Critique and recommendations. *Research in Nursing & Health*, 29(5), 489–497.
- Rains, S. A., & Brunner, S. R. (2015). The outcomes of online self-disclosure: A meta-analytic review. *Communication Research*, 42(4), 451-479.
- Rimé, B. (2009). Emotion elicits the social sharing of emotion: Theory and empirical review. *Emotion Review*, 1(1), 60-85 ..
- Shanjani, S., Nazarebali, N., & Fallahzadeh, H. (2022). Comparison of emotional reactivity and theory of mind in girls based on mothers' emotional expressiveness styles. *Applied Psychology*, 16(4), 55–70. [In Persian]
- Valkenburg, P. M., & Peter, J. (2013). The differential susceptibility to media effects model. *Journal of Communication*, 63(2), 221-243.