



DEVELOPMENT AND INITIAL VALIDATION OF THE EMOTIONAL REGULATION SCALE (ERS-14) AMONG EARLY AND YOUNG ADULTS IN INDIA

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Abstract: Emotion regulation is a complex process by which individuals identify, monitor, evaluate, and modify their emotional experiences and expressions in the pursuit of personal goals and adaptation to different situational demands. However, most standardized measures of emotion regulation have been developed and validated primarily within Western, individualistic contexts. Because emotional suppression functions adaptively to maintain group harmony and relational stability within collectivistic cultures like that of India, the generalization of such measures might be limited. Therefore, the present study sought to develop and validate the Emotional Regulation Scale (ERS-14), a culturally contextualized instrument for early and young adults in India. A sample of 68 Indian participants (47 females, 21 males; age range 18-40 years, $M = 22.57$, $SD = 5.89$) completed an initial pool of 24 items representing three conceptual domains: Emotional Control and Regulation (ECR), Emotional Expression and Communication (EEC), and Emotional Awareness (EA). Exploratory Factor Analysis employing Principal Axis Factoring with Varimax rotation identified a three-factor structure accounting for 52.9% of total variance. The finalized 14-item ERS-14 revealed acceptable internal consistency coefficients (ECR: $\alpha = .74$; EEC: $\alpha = .73$; Overall: $\alpha = .65$; EA: $\alpha = .56$). Results indicate that the ERS-14 is a psychometrically sound and culturally relevant tool to assess emotion regulation among early and young Indian adults, thus serving as a starting point for further refinement and validation in larger, more heterogeneous populations.

Index Terms: emotion regulation, scale development, cultural validation, ERS-14, emotional control, Indian young adults, psychometric assessment, factor analysis

I. INTRODUCTION

Emotion regulation involves the complex and multifaceted processes by which individuals manage their emotions, determining which emotions they experience and when, how these emotions are felt, and how they are expressed to achieve personal goals and adapt to situational demands. Gross's process model identifies five key strategies that occur at different stages of emotion generation: situation selection, situation modification, attentional deployment, cognitive change, and response modulation. These strategies represent a distinction between antecedent-focused strategies, occurring before a full emotional response takes place, and response-focused strategies, occurring after an emotional response is generated. Importantly, these processes can be either conscious or automatic, with mechanisms involving attention, cognitions, behaviors, and physiology.

In Thompson's developmental framework, emotion regulation is a developmental theme that integrates emotional activation with self-regulatory influences, guided by theory of mind, emotion understanding, and sociocultural display rules, rather than a way of constraining emotion. This view indicates that emotions are regulated by social contexts in which they are experienced. Koole's self-regulation model was developed based on conceptualizations of emotion regulation with goal-oriented processes targeting lower-level emotional components. He suggested that earlier interventions in the timeline of emotion are more effective. These multiple theoretical frameworks collectively suggest that adaptive emotion regulation involves flexible strategy selection based on situational demands and cultural context.

Literature Review

Most standardized measures of emotion regulation currently in wide use have been created and validated primarily within Western, individualistic cultural contexts. Many of these questionnaires conceptualize certain regulatory strategies, such as emotional suppression, as maladaptive or harmful. There is growing empirical evidence, however, that suppression functions adaptively in collectivistic cultures like India by maintaining group harmony, avoiding interpersonal conflict, and preserving relational stability. Consequently, existing scales of emotion regulation (such as the Emotion Regulation Questionnaire [ERQ] and the Difficulties in Emotion Regulation Scale [DERS]) likely fail to capture the culturally embedded regulatory strategies in everyday use by Indian young adults, including the public control of emotional expression coupled with private emotional disclosure, the pursuit of relational support through family and community networks, and the use of spiritually oriented coping mechanisms integral to the Indian sociocultural environment.

Research has demonstrated that regulatory strategies such as suppression and reappraisal function differently across cultural contexts. While Western frameworks often view suppression negatively, in collectivistic cultures like India, suppression facilitates group cohesion and minimizes interpersonal conflict. Moreover, strategies such as seeking relational support within familial networks and spiritually oriented coping mechanisms represent adaptive regulatory processes within the Indian sociocultural context. Recent research has emphasized a critical need to develop assessment tools that are culturally sensitive for Indian populations. Culturally adapted instruments demonstrate superior predictive validity and clinical utility in non-Western contexts, justifying the development of context-specific measures such as the ERS-14 that reflect the real-life experiences and cultural values of Indian young adults.

Research Objectives

The present study aimed to fill this critical lacuna in the assessment of emotional regulation among early and young adults in India through the development and preliminary validation of the ERS-14. The construction process followed a bottom-up principle to make this brief yet comprehensive instrument culturally grounded and contextually relevant. The specific research objectives were: (1) to develop and refine a culturally relevant item pool that adequately represents emotion regulation as experienced within Indian cultural contexts; (2) to examine the underlying factor structure of the scale using exploratory factor analysis; (3) to evaluate the internal consistency and reliability of the resulting subscales and overall ERS-14 instrument; and (4) to establish the ERS-14 as a psychometrically sound tool for assessing emotion regulation among early and young Indian adults.

II. METHOD

Participants

The study sample comprised 68 early and young adults from India, including 47 females (69.1%) and 21 males (30.9%), with ages ranging from 18 to 40 years ($M = 22.57$, $SD = 5.89$). Participants were stratified into three age groups: 18-25 years ($n = 48$, 70.6%), 26-35 years ($n = 15$, 22.1%), and 36-40 years ($n = 5$, 7.4%). Participants represented diverse educational and occupational backgrounds, including undergraduate and postgraduate students, employed professionals, and individuals engaged in various occupational roles. Recruitment was conducted through convenience sampling via social media platforms and personal networks. Inclusion criteria required participants to be between 18 and 40 years of age, fluent in English, and willing to provide informed consent. Participants with severe psychiatric conditions requiring acute treatment were excluded from the study. Participation was entirely voluntary, and all participants provided electronic informed

consent before data collection. The study received ethical approval from the institutional review board of Aurora's Degree and PG College.

Instrument Development

The ERS-14 was designed to provide comprehensive coverage of emotion regulation across three discrete yet interrelated domains theoretically derived from emotion regulation literature and informed by cultural consultation with experts familiar with Indian populations. An initial broad pool of 24 self-report items was generated based on a comprehensive literature review, collaborative expert feedback, and cultural consultation. Items were phrased as simple statements intended to reflect behaviors and experiences characteristic of emotion regulation within Indian contexts.

The three subscales were conceptualized as follows:

Emotional Control and Regulation (ECR): This domain captures the ability to handle emotional intensity, regulate emotional responses in difficult circumstances, and maintain composure. Items assess both internal regulatory processes and behavioral manifestations of emotional control, reflecting the individual's capacity to modulate emotional responses adaptively.

Emotional Expression and Communication (EEC): This domain assesses how individuals express emotions within relationships and communicate emotional experiences with others. Importantly, this domain reflects the balance between public emotional display regulation and private emotional disclosure, particularly relevant in collectivistic settings where context-dependent emotional expression is culturally normative.

Emotional Awareness (EA): This domain assesses recognition and understanding of internal emotional signals, bodily awareness of emotions, sensitivity to mood fluctuations, and the ability to identify emotional antecedents. Enhanced emotional awareness facilitates more adaptive regulatory responses.

Respondents rated each item using a 5-point Likert-type scale (1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree), with higher scores indicating stronger agreement with or greater frequency of described regulatory behaviors. Two items (Items 5 and 8) were reverse-scored to capture difficulties in emotion regulation, such that higher endorsements reflect poorer regulation abilities. Reverse scoring was calculated as: $\text{Reverse Score} = 6 - \text{Original Response}$.

Data Collection and Procedure

Data collection was conducted from October 28 to November 1, 2025. The study employed an online survey format using a questionnaire prepared in Google Forms and distributed via social media platforms and personal networks. Upon opening the link, participants reviewed an information sheet explaining the study's purpose and conditions regarding confidentiality and voluntariness. Only those who provided electronic consent proceeded to demographic items regarding age, sex, education, and occupational status, followed by the 24-item emotion regulation questionnaire. Data collection occurred during a single session, with questionnaire completion requiring approximately 15-20 minutes. No identifiable personal information beyond basic demographics was included in subsequent analyses. All data were de-identified immediately following collection. The study adhered strictly to the American Psychological Association's ethical guidelines for the treatment of human research participants.

Data Analysis

All analyses employed responses to the full 24-item pool before item reduction. Preliminary factorability assessment included computation of the Kaiser-Meyer-Olkin (KMO) index and Bartlett's test of sphericity to evaluate sampling adequacy and correlation matrix factorability. Exploratory Factor Analysis (EFA) was conducted using Principal Axis Factoring with Varimax rotation to identify the underlying factor structure. Decisions regarding factor retention were guided by eigenvalues exceeding 1.0, scree plot inspection, and interpretability of the factor solution. Items demonstrating salient loadings $\geq .50$ on theoretically expected factors with minimal cross-loadings $< .40$ were selected for the final ERS-14. This criterion approach ensures psychometric rigor while maintaining conceptual coherence.

Internal consistency was investigated for each subscale (ECR, EEC, EA) and the total scale using Cronbach's alpha. Alpha coefficients $\geq .70$ were considered acceptable for established measures with pre-existing data, whereas $\geq .60$ represented an acceptable threshold for newly developed scales, given the exploratory nature of the research. Descriptive statistics, including means, standard deviations, and frequency

distributions, were calculated for all measures to summarize the distribution of emotion regulation scores in the sample. Independent samples t-tests examined potential gender differences in emotion regulation subscale scores, while one-way ANOVA assessed differences across age groups. All statistical analyses were performed using IBM SPSS Statistics Version 26.0, with significance levels set at $\alpha = .05$.

III. RESULTS

Demographic Characteristics

The final sample consisted of 68 respondents (Table 1). Women represented 69.1% ($n = 47$) and men 30.9% ($n = 21$) of participants. Ages ranged from 18 to 40 years, with a mean age of 22.57 years ($SD = 5.89$), indicating a sample primarily representing young adults with variability across early adulthood. The majority of participants (70.6%, $n = 48$) fell within the 18-25 age group, with fewer participants in older age ranges.

Variable	Category	n (%)
Gender	Female	47 (69.1)
	Male	21 (30.9)
Age Group	18-25 years	48 (70.6)
	26-35 years	15 (22.1)
	36-40 years	5 (7.4)

Table 1: Demographic Characteristics of Study Sample (N = 68)

Factor Structure

Preliminary analysis of factorability supported the appropriateness of the data for factor analysis. The KMO measure of sampling adequacy was .65, above the .60 threshold recommended by Kaiser. Bartlett's test of sphericity reached statistical significance, $\chi^2(91) = 262.92$, $p < .001$, indicating that the correlation matrix was significantly different from an identity matrix and therefore suitable for factor analysis.

Exploratory Factor Analysis with Principal Axis Factoring and Varimax rotation yielded a three-factor solution explaining 52.9% of total variance. This three-factor solution supported the hypothesized theoretical structure with clear factor differentiation. Variance accounted for by Factor 1 (Emotional Control and Regulation) was 28.4%, Factor 2 (Emotional Expression and Communication) was 15.2%, and Factor 3 (Emotional Awareness) was 9.3%. These proportions align with typical distributions in initial scale development studies.

Following the retention criterion of factor loadings $\geq .50$ with minimal cross-loadings $< .40$, the original 24-item pool was reduced to a final 14-item ERS-14 through elimination of 10 items with inadequate loadings or excessive cross-factor correlations. The retained items demonstrated a clear factor structure with appropriate loadings and interpretability.

Reliability and Descriptive Statistics

Descriptive statistics and reliability coefficients for the ERS-14 subscales appear in Table 2. Cronbach's alpha was .74 for ECR, .73 for EEC, and .56 for EA; overall alpha was .65 for the total ERS-14 score. The subscales ECR and EEC produced adequate internal consistencies according to guidelines for newly developed measurement instruments. Although the EA subscale demonstrated weaker reliability than other subscales ($\alpha = .56$), this coefficient remained within a reasonable range for initial validation of a short subscale, particularly given the relatively small sample size ($N = 68$). According to Cronbach's recommendations, for newly developed scales with few items per subscale, alpha coefficients between .50 and .70 are reasonable during early validation stages.

Subscale	M	SD	n items	α
Emotional Control and Regulation (ECR)	20.06	4.82	6	.74
Emotional Expression and Communication (EEC)	12.87	3.56	4	.73
Emotional Awareness (EA)	15.39	4.12	4	.56
Total ERS-14 score	48.32	10.45	14	.65

Table 2: Descriptive Statistics and Cronbach's Alpha Coefficients for ERS-14 Subscales (N = 68)

Gender Differences

Independent samples t-tests were conducted to examine potential gender differences in emotion regulation subscale scores (Table 3). No statistically significant gender differences were observed across any subscales or total ERS-14 score (all p s > .05). This finding suggests that emotion regulation profiles do not significantly differ between males and females in this sample, which may reflect contemporary societal shifts in Indian urban young adult populations toward greater flexibility and normalization of emotional expression across genders. These results contrast with some Western literature reporting gender differences favoring females in emotion regulation capacities.

Subscale	Males (n=21) M (SD)	Females (n=47) M (SD)	t	p
ECR	19.43 (5.18)	20.40 (4.64)	-0.74	.46
EEC	12.52 (3.82)	13.06 (3.41)	-0.56	.58
EA	15.14 (4.45)	15.51 (3.96)	-0.33	.74
Total ERS-14	47.10 (11.84)	48.98 (9.69)	-0.69	.49

Table 3: Gender Differences in ERS-14 Subscale Scores (Independent Samples t-test Results)

Age Group Comparisons

One-way ANOVA was conducted to examine potential differences in emotion regulation across the three age groups (18-25, 26-35, 36-40 years; Table 4). Results revealed no statistically significant differences in emotion regulation across age groups (all p s > .05), suggesting that emotion regulation capacities remain relatively stable across the early and young adulthood spectrum (18-40 years) in this Indian sample. These findings align with developmental theories suggesting relative stability in personality and regulatory processes during adulthood.

Subscale	18-25 yrs M (SD)	26-35 yrs M (SD)	36-40 yrs M (SD)	F	p
ECR	20.25 (4.63)	19.33 (5.41)	20.60 (4.61)	0.36	.70
EEC	12.73 (3.42)	13.40 (3.68)	12.80 (3.96)	0.24	.79
EA	15.31 (4.18)	15.93 (3.92)	15.00 (4.47)	0.18	.84
Total ERS-14	48.29 (9.94)	48.67 (11.74)	48.40 (11.52)	0.02	.98

Table 4: Age Group Differences in ERS-14 Subscale Scores (One-way ANOVA Results)

Emotional Regulation Scale (ERS-14)**Instructions**

Please read each statement carefully and choose how much you agree or disagree.

Use the following scale:

- 1 - Strongly Disagree
- 2 - Disagree
- 3 - Neutral
- 4 - Agree
- 5 - Strongly Agree

There are no right or wrong answers. Choose what best describes you.

Part A: Emotional Control & Regulation

No.	Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	I can calm myself down after feeling very upset.	<input type="checkbox"/>				
2	When I am stressed, I can still make sensible decisions.	<input type="checkbox"/>				
3	I can return to a normal mood after a stressful event.	<input type="checkbox"/>				
4	I can reduce my anger or sadness using things that usually help me (talking, breathing, walking).	<input type="checkbox"/>				
5	Once I start	<input type="checkbox"/>				

	worrying, it is hard to stop.					
6	I can control how much I show my emotions in public situations.	<input type="checkbox"/>				

Part B: Emotional Expression & Communication

No.	Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
7	I can talk about my feelings with someone I trust.	<input type="checkbox"/>				
8	I keep my feelings to myself even when they bother me.	<input type="checkbox"/>				
9	Sharing my feelings usually helps me feel better.	<input type="checkbox"/>				
10	I can ask for help when my emotions become overwhelming.	<input type="checkbox"/>				

Part C: Emotional Awareness

No.	Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
11	I notice how my body feels when I am upset (e.g., heart racing, tense).	<input type="checkbox"/>				
12	When something happens, I quickly understand if it affects me emotionally.	<input type="checkbox"/>				
13	I notice small changes in my mood during the day.	<input type="checkbox"/>				
14	I can tell whether I am more sad, angry, or worried in a situation.	<input type="checkbox"/>				

Scoring Guide

Reverse-Scored Items: 5 and 8

Reverse these scores using the following rule:

- 1 → 5
- 2 → 4
- 3 → 3
- 4 → 2
- 5 → 1

Subscale Scoring

- Emotional Control & Regulation: Items 1, 2, 3, 4, 5(R), 6 (Range: 6–30)
- Emotional Expression & Communication: Items 7, 8(R), 9, 10 (Range: 4–20)
- Emotional Awareness: Items 11, 12, 13, 14 (Range: 4–20)

Total Score

Add all 14 items (after reverse scoring).

Total Range: 14–70

Higher score = Better emotion regulation ability.