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Development and Validation of Self-Regulation Scale among Late Adolescents

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Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

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ABSTRACT

Self-regulation is defined from an applied perspective as the act of managing cognition and emotion to enable goal-directed actions like organizing behavior, controlling impulses, and solving problems constructively necessary for success in college, relationships, and the workplace. The study's aim was to construct and validate Self-Regulation Scale among late adolescents. The Self-Regulation Scale (SRS) consisted of 60 statement on selected dimensions of self-regulation. To establish the content validity, Self-Regulation Scale was evaluated by subject experts and thereafter reliability of the scale was calculated through pilot study. A total sample of 60 late adolescents i.e. 20 respondents from nuclear families, 20 respondents from single parent families and 20 respondents from joint families, between the ages of 19-21 years were selected through simple random sampling method from College of Community and Applied Sciences, MPUAT, Udaipur. For deriving reliability of the scale, split-half method was used. This finding of reliability and validity scores suggested that SRS is an acceptable instrument for assessment self-regulation of late adolescents.

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Keywords: Self-regulation; late adolescents; validity; reliability; split-half method.

1. INTRODUCTION

Self-regulation is defined from an applied perspective as the act of managing cognition and emotion to enable goal-directed actions like organizing behavior, controlling impulses, and solving problems constructively necessary for success in college, relationships, and the workplace (Schunk and Zimmerman, 2012). According to Murray et al. (2015), the ability of a child to comprehend, express, and modulate their thoughts, feelings, and behavior is facilitated by "co-regulation," which is given by parents or other caring adults through warm and responsive interactions. Prolonged or intense stress and misfortune, such as homelessness and traumatic experiences, can interfere with one's ability to regulate oneself. Research has also shown that those with better levels of self-regulation are better able to manage their emotions (Webb et al. 2012). Similarly, studies conducted (Berking et al. 2012) that individuals trained in self-regulation had better abilities to manage their emotions through acceptance-based, distraction and reappraisal strategies. Studies examine the relationship between self-regulation and cognitive emotion regulation strategies, which are classified as either maladaptive or adaptive coping mechanisms for stressful events (Garnefski et al. 2003).

Furthermore, Brausch and Muehlenkamp (2018) discovered that individuals with stronger self-regulation skills frequently employed cognitive reappraisal and relied less on unhealthy coping mechanisms like avoidance or self-harm. Additionally, this study demonstrated that those with lower levels of self-regulation tended to employ ruminating more frequently, which is a maladaptive cognitive emotion management strategy. Additionally, adolescents with high levels of anxiety who participated in an intervention designed to enhance their self-regulation abilities demonstrated improvements in cognitive emotion regulation strategies such as cognitive reappraisal and problem-solving, according to a study by (Benoit et al. 2021). This suggests that therapies targeted at enhancing self-regulation may benefit adolescents' emotional wellness by having a positive effect on their cognitive emotion control abilities.

The group with high emotion dysregulation fared significantly better than the group with low emotion dysregulation on two self-report measures of impulsivity, harm avoidance, and cognitive reasoning. The cognitive impulsivity and impulsive behaviors of either group did not differ significantly. All things considered, this study demonstrates a link between impulsivity and emotion dysregulation, suggesting that emotion regulation should be considered when assessing individuals who are at a higher risk of developing an addiction (Schreiber et al., 2012).

Adolescent self-regulation serves as the cornerstone for interpersonal and individual processes in the self-management of chronic illnesses in adolescents. Numerous interpersonal (parental supervision and friend support) and individual (self-efficacy, coping, and adherence) characteristics have been found to be sources of risk and resilience for adolescents' self-management of chronic illnesses. Individual and interpersonal sources of risk and resilience throughout development are rooted in self-regulation, which includes cognitive, emotional, and behavioral regulation (Lansing and Berg, 2014).

Self-esteemed goals sometimes turn into misdirected intentions, according to research. Even when goals are important and strongly driven, they can easily become difficult to accomplish in the face of temptations, obstacles, and disappointments. The study and model discussed here focus on how people can stay determined when faced with extreme situational pressure to quit up. Research on the basic mechanisms and dynamics that allow delaying enjoyment has shown that exercising willpower requires "cooling," or removing oneself from the unpleasant arousal of difficult and frustrating situations. This type of attention control helps prevent "hot," impulsive reactions that jeopardize the accomplishment of long-term objectives.

The attentional control processes that are visible in toddlerhood and continue to influence important life outcomes throughout adolescence and adulthood, including the intellectual, social, and interpersonal domains, are measured by the preschool delay of gratification paradigm. Most importantly, they seem to serve as protective barriers against the negative long-term consequences of dispositional vulnerabilities. These self-control and defense processes are conceptualized in a cognitive-affective processing system model of personality. The attentional control processes that are visible in

toddlerhood and continue to influence important life outcomes throughout adolescence and adulthood, including the intellectual, social, and interpersonal domains, are measured by the preschool delay of gratification paradigm. Most importantly, they seem to serve as protective barriers against the negative long-term consequences of dispositional vulnerabilities. These self-control and defense processes are conceptualized in a cognitive-affective processing system model of personality (Mischel et al., 2011).

Adolescent American Indians from a Northern Plains tribe's cognitive self-regulation abilities and depression. Students filled out questionnaires on depressed symptoms, ambitions, self-efficacy, and negative life experiences. The results demonstrated a strong relationship between depression and academic self-efficacy. Furthermore, intrinsically compelling goal representations were associated with academic self-efficacy. In addition, students who showed strong academic self-efficacy had goals that they valued more, gave more thought to, and saw as something they wanted for themselves rather than something that was imposed on them. Goals that older adolescents were more likely to identify as their own were linked to higher levels of academic self-efficacy. Higher degrees of depressive symptoms were also linked to these self-oriented aspirations as opposed to other-oriented ones (Vannucci and McCauley Ohannessian, 2018).

Self-regulation and volition are reliant on a limited resource, and when that supply is depleted, self-regulation is more likely to fail. Going beyond conventional models that have emphasized the significance of self-regulation in assisting individuals in overcoming addiction, suggest that self-regulation is used to assist and resist addictive behaviors. Self-regulation is often necessary to overcome an early resistance to drugs and alcohol and to sustain addictive usage behaviors in the face of situational challenges (e.g., illegality, unpredictability, or rejection from family). Another essential part of sustaining addiction is keeping us from losing control and interfering with other aspects of our lives. More generally, it appears that the automaticity and irresistibility of addictive responses may have been overestimated because addicted behaviors respond rationally to incentives and other factors. Quitting is aided by self-regulation, and relapse may be more likely when self-regulation is impaired (Baumeister and Vonasch, 2015).

The relationships between 589 first-year college students' academic self-regulation, target and actual grade point averages (GPA), and time use at three distinct times. The findings showed that students put socializing and work obligations before of preparation and academic time during their first semester. Students often planned to spend more time studying during the second semester. The use of academic time (planned and actual academic hours) is linked to higher levels of self-regulated learning and the desired GPA in the first and second semesters. Students who did not meet expectations in their first semester decreased their GPA in the second semester rather than making more time for their studies (Thibodeaux et al., 2017).

The purpose of this research is to raise awareness of the elements that influence late-adolescent self-regulation as well as new trends and challenges that need to be addressed. As better self-regulation is associated with higher income, better financial planning, less risky behaviors like substance abuse and aggression, and lower health expenditures, it is an investment in society to support late teenage self-regulation development. Self-regulation, or learning from mistakes, was found to be a strong predictor of coping skills, confidence, persistence, and the ability to adapt and tolerate adverse circumstances. Late adolescents are better able to handle the stresses and hardships that life may bring when they are able to self-regulate their behavior, identify their emotions, and control their feelings. They are also better able to retain information, concentrate, think flexibly, and suppress impulsive behavior. This promotes mental wellness, which improves life quality (Singh and Mishra, 2020).

2. METHODOLOGY

The study’s aim was to construct and validate (Singh and Mishra, 2020), Self-regulation Scale among Late Adolescents. The The steps involved in development and validation Self-regulation Scale of are explained below:

1. Construction of Scale
2. Scoring of the Scale
3. Content validation of Scale
4. Reliability of Scale

3. RESULTS

Construction of Self-Regulation Scale (SRS): The dimensions of Self-regulation Scale Among Late Adolescents are explained as follows:

i. **Emotional Self-Regulation:** It refers to controlling and regulating one's emotions in order to react to circumstances in a suitable manner. It entails cultivating empathy, compassion, and the ability to control negative emotions.

ii. **Cognitive Self-Regulation:** It refers to the capacity to regulate and control one's own feelings and ideas. It improves general wellbeing and decision-making. Goal-orientation, decision-making, problem-solving, and self-monitoring is all included.

iii. **Behavioral Self-Regulation:** It refers to managing and changing one's behavior to conform to norms or intended aims. Maintaining healthy habits and reaching long-term goals require the development of behavioral self-regulation. It encompasses delay gratification, active behavior coping, and impulsive control.

A. List of dimensions: Detailed information of dimensions is given as below-

Table 1. Dimensions of self-regulation scale

S.No.	Dimensions	Statements
1.	Emotional Self-Regulation	20
2.	Cognitive Self-Regulation	20
3.	Behavioral Self-Regulation	20
Self-Regulation		60

B. Operational layout of scale construction: Scale construction is a time consuming process. The detailed information in regard to completion of the scale is given as below-

Table 2. Operational layout of scale construction

S.No.	Operational Details	Time consumed
1.	Construction of a Self-Regulation Scale	2 Months
2.	Content validation of Self-Regulation Scale by panel members	15 Days
3.	Modification and improvements suggested by panel members in content of Self-Regulation Scale	7 Days
4.	Pilot study for reliability testing of Self-Regulation Scale	15 Days

3.1 Scoring of Self-Regulation Scale (SRS)

The scale contained 60 statements. There are 3 dimensions of Self-Regulation including Emotional Self-Regulation, Cognitive Self-Regulation and Behavioral Self-Regulation. There were four options for every statement i.e. “Strongly Agree”, “Agree”, “Disagree” and “Strongly Disagree”. The scores assigned to positive statements were 4, 3, 2, 1 and for negative statements it was 1, 2, 3, 4. The maximum score was ‘240’ and minimum score was ‘60’.

A. Description of format of statements in SRS:

Table 3. Description of format of statements in self-regulation scale

S.No.	Dimensions	Statements regarding Self-Regulation
1.	Emotional Self-Regulation	1) I take a break to control my strong impulse of anger. 2) I apologize if I hurt someone’s feelings by my words. 3) When others are feeling trouble, I usually let someone else attend to them.
2.	Cognitive Self-Regulation	1) I set realistic goals for myself and work to achieve them. 2) I consider what will happen before I make a decision. 3) I tend to break down the difficult task and complete it.
3.	Behavioral Self-Regulation	1) I know what triggers me and how to control them. 2) I try to let things work out on their own. 3) For delay gratifications, I resist the impulse to start a fight or react angrily to my family members, friends or peers instead use my communication skills to find a constructive solution.

Note: There were Response Options i.e. Strongly Agree, Agree, Disagree and Strongly Disagree for each statement as given in four aspects.

B. Scoring Method of SRS:

There were sixty statements on the self-regulation scale, and each one was given one of four pointer scores: strongly agree (4), agree (3), disagree (2), and severely disagree (1). By subtracting the maximum scores from the minimum scores, the score ranges for this dimension were determined. Poor, average, and good were the three equally spaced groups into which scores were separated. The lowest possible score was one, and the highest possible score was four. The highest possible score for overall self-regulation was 240, while the lowest possible score was 60. To determine the good (182-240), average (121-181), and poor (60-120) scores, this score was split into three groups. A high self-regulation score indicates good self-regulation, whereas a low score indicates poor self-regulation.

There are twenty statements in all in the emotional self-regulation dimension. Each sentence was given one of four options and scores: strongly disagree (1), disagree (2), agree (3), and strongly agree (4). By subtracting the maximum scores from the minimum scores, the score ranges for this dimension were determined. Poor, average, and good were the three equally spaced groups into which scores were separated. Each statement received a minimum score of one and a maximum value of four. The lowest possible score in this dimension was 20, and the highest possible score was 80. To determine the good (62–80), average (41-61), and poor (20–40) scores, this score was split into three categories. Good emotional self-regulation is indicated by a high score, while poor emotional self-regulation is indicated by a low score.

There are twenty statements in all in the cognitive self-regulation dimension. Each sentence was given one of four options and scores: strongly disagree (1), disagree (2), agree (3), and strongly agree (4). By subtracting the maximum scores from the minimum scores, the score ranges for this dimension were determined. Poor, average, and good were the three equally spaced groups into which scores were separated. The lowest possible score was one, and the highest possible score was four. The lowest possible score in this dimension was 20, and the highest possible score was 80. To determine the good (62–80), average (41-61), and poor (20–40) scores, this score was split into three categories. Good cognitive self-regulation is indicated by a high score, the medium cognitive self-regulation is shown by an average score, and poor cognitive self-regulation is indicated by a low score.

There are twenty statements in the behavioral self-regulation component. Each sentence was given one of four options and scores: strongly disagree (1), disagree (2), agree (3), and strongly agree (4). By subtracting the maximum scores from the minimum scores, the score ranges for this dimension were determined. Poor, average, and good were the three equally spaced groups into which scores were separated. The lowest possible score was one, and the highest possible score was four. The lowest possible score in this dimension was 20, and the highest possible score was 80. To determine the good (62–80), average (41-61), and poor (20–40) scores, these scores were separated into three categories. Good behavioral self-regulation is indicated by a high score, average behavioral self-regulation is indicated by a moderate score, and poor behavioral self-regulation is indicated by a low score.

3.2 Content Validation of Self-Regulation Scale (SRS)

Scales were submitted to a panel of six experts for technical evaluation in order to ensure content correctness. The experts on the panel came from a variety of disciplines, including Food Science and Nutrition (1), Extension Education and Communication Management (2), and the Department of Human Development and Family Studies (3). The panel of specialists that was chosen was knowledgeable, skilled, and concerned of the issues that late teens face.

It was requested that the panel of experts assess all three scales (IRS, SRS, and RS) for topic relevance for subjects, tool length, sentence structure, language, clarity, and continuity, tool appropriateness as objectives, scoring pattern, categorization, and overall content. Some statements were combined, changed, and reorganized based on the advice of experts. The Likert Scale, a five-point rating system that assigns a score of five to excellent, very good, good, average, and poor, served as the basis for validating all three scales.

Excellent received five (5) points, very good received four (4), good received three (3), average received two (2), and poor received one (1). Mean scores were calculated for a few chosen parameters in order to rank the scales' quality.

Table 4. Details of five point rating scale used for content validation

S.No.	Score Range	Value
1.	1-1.8	Poor
2.	1.9-2.6	Average
3.	2.7-3.4	Good
4.	3.5-4.2	Very good
5.	4.3	Excellent

Table 5. Dimension and sub dimension wise reliability score for scales

Scale	Reliability Co-efficient
Self-Regulation Scale	0.79
Emotional Self-Regulation	0.76
Cognitive Self-Regulation	0.78
Behavioral Self-Regulation	0.80

3.3 Reliability of Self-Regulation Scale (SRS)

The split-half method was used to determine the scale's reliability. A pilot study was conducted with thirty participants. The split-half technique was used to code the data and gather reliability for both the whole scale and individual dimensions (Singh and Mishra, 2020). The test was split in half, and the coefficient of correlation between the variables was then calculated to estimate the correlation of the entire scale. Regarding the time needed for scale administration and data analysis, the pilot research has also given the appropriate guidance.

Formula used:

$$r = \frac{\sum_{i=1}^{n} x_i y_i - \left(\frac{\sum_{i=1}^{n} x_i \sum_{i=1}^{n} y_i}{n}\right)}{\sqrt{\left(\sum_{i=1}^{n} x_i^2 - \frac{(\sum_{i=1}^{n} x_i)^2}{n}\right)\left(\sum_{i=1}^{n} y_i^2 - \frac{(\sum_{i=1}^{n} y_i)^2}{sn}\right)}} s$$

Where,

r= correlation coefficient
x_i and y_i= the two variable in each cases
n= total number of observations

The reliability coefficient of all three scales was used to calculate by Spearman-Brown Prophecy formula:

$$r_{tt} = \frac{2r_{hh}}{1 + r_{hh}}$$

Where,

r_{tt} = reliability co-efficient of whole test in split-half technique

r_{hh} = reliability co-efficient of half test in split-half technique

4. DISCUSSION

In this study, sixty late-adolescent participants were used to test the reliability of the SRS's three-dimensional scale. The outcomes showed that the scale is valid and reliable. The Self-regulation Scale can be used in both group and individual contexts. It aids in evaluating how well adolescents are able to control their emotions, behaviors, and thoughts. It's useful to pinpoint the areas in which adolescents thrive at self-control and those where they can use more refinement. The scale can be used by researchers to look into the connections between self-regulation and a range of outcomes, including social functioning, mental health and academic success.

5. CONCLUSION

The reliability of Self-regulation Scale for the late adolescents' population in MPUAT Udaipur, Rajasthan. The validity and reliability index suggests that SRS is an acceptable instrument to assess self-regulation among late adolescents. It is hoped that the publication of this SRS will be open new vistas for understanding the self-regulation among late adolescents, in rapidly changing scenario. This SRS will prove to be useful for specialists and scholars of Human Development and Family Studies and allied fields.

DISCLAIMER (ARTIFICIAL INTELLIGENCE)

Author(s) hereby declare that NO generative AI technologies such as Large Language Models

(ChatGPT, COPILOT, etc.) and text-to-image generators have been used during the writing or editing of this manuscript.

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COMPETING INTERESTS

Authors have declared that they have no known competing financial interests or non-financial interests or personal relationships that could have appeared to influence the work reported in this paper.

REFERENCES

Baumeister, R. F. and Vonasch, A. J. 2015. Uses of self-regulation to facilitate and restrain addictive behavior. *Addictive behaviors*, 44: 3-8.

Benoit, V. and Gabola, P. 2021. Effects of positive psychology interventions on the well-being of young children: A systematic literature review. *International journal of environmental research and public health*, 18(22): 12065.

Berking, M., Poppe, C., Luhmann, M., Wupperman, P., Jaggi, V. and Seifritz, E. 2012. Is the association between various emotion-regulation skills and mental health mediated by the ability to modify emotions? Results from two cross-sectional studies. *Journal of behavior therapy and experimental psychiatry*, 43(3): 931-937.

Brausch, A. M. and Muehlenkamp, J. J. 2018. Perceived effectiveness of NSSI in achieving functions on severity and suicide risk. *Psychiatry research*, 265: 144-150.

Garnefski, N., Boon, S. and Kraaij, V. 2003. Relationships between cognitive strategies of adolescents and depressive symptomatology across different types of life event. *Journal of Youth and Adolescence*, 32: 401-408.

Lansing, A. H. and Berg, C. A. 2014. Topical review: Adolescent self-regulation as a foundation for chronic illness self-management. *Journal of pediatric psychology*, 39(10): 1091-1096.

Mischel, W., Ayduk, O., Berman, M. G., Casey, B. J., Gotlib, I. H., Jonides, J. and Shoda, Y. 2011. 'Willpower'over the life span: decomposing self-regulation. *Social cognitive and affective neuroscience*, 6: 252-256.

Murray D.W., Rosanbalm K.D., Christopoulos C. and Hamoudi A. 2015. Self-regulation and toxic stress: Foundations for understanding self-regulation from an applied developmental perspective.

Schreiber, L. R., Grant, J. E. and Odlaug, B. L. 2012. Emotion regulation and impulsivity in young adults. *Journal of psychiatric research*, 46: 651-658.

Schunk, D. H. and Zimmerman, B. J. 2012. Self-regulation and learning. *Handbook of Psychology, Second Edition*, 7.

Singh, R. and Mishra, R. 2020. Development and validation of Mental Health Battery (MHB) for young adults. Indian *Journal of Health and Well-being*, 11: 592-595.

https://iahrw.org/our-services/journals/indian-journal-of-health-wellbeing/

Thibodeaux, J., Deutsch, A., Kitsantas, A. and Winsler, A. 2017. First-year college students' time use: Relations with self-regulation and GPA. *Journal of Advanced Academics*, 28: 5-27.

Thibodeaux, J., Deutsch, A., Kitsantas, A. and Winsler, A. 2017. First-year college students' time use: Relations with self-regulation and GPA. *Journal of Advanced Academics*, 28: 5-27.

Vannucci, A. and McCauley Ohannessian, C. 2018. Self-competence and depressive symptom trajectories during adolescence. *Journal of Abnormal Child Psychology*, 46: 1089-1109.

Webb, T. L., Miles, E. and Sheeran, P. 2012. Dealing with feeling: a meta-analysis of the effectiveness of strategies derived from the process model of emotion regulation. *Psychological bulletin*, 138: 775. 10.1037/a0027600

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