

## An Empirical Study on the Relationship between Resilience and Happiness among Adolescents

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### Abstract

Adolescence is a critical developmental period characterised by rapid psychological, emotional, and social transitions that heighten vulnerability to stress and mental health challenges. The present study examined the relationship between resilience and happiness among adolescents and explored gender differences in happiness levels. A correlational research design was employed with a purposively selected sample of 100 school students (50 male, 50 female) aged 16–18 years from Jammu district, India. Two standardised instruments were administered: the Academic Resilience Scale (Mallick & Kaur, 2016) and the Happiness Scale (Bhardwaj & Das, 2017). Pearson product-moment correlation and independent samples *t*-test were used for data analysis. Results revealed a statistically significant positive correlation between resilience and happiness ( $r = .63, p < .01$ ), indicating that adolescents with higher resilience reported greater happiness. Additionally, female adolescents exhibited significantly higher happiness scores ( $M = 52.68, SD = 8.97$ ) compared to male adolescents ( $M = 48.90, SD = 9.45$ ),  $t(98) = 2.36, p = .021$ , Cohen's  $d = 0.47$ . These findings suggest that resilience functions as a significant protective factor enhancing adolescent emotional well-being, and underscore the need for culturally grounded resilience-building interventions in Indian educational settings.

**Keywords:** Adolescents, resilience, happiness, gender differences, subjective well-being, India.

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### Introduction

Adolescence represents a pivotal transitional stage of human development encompassing rapid physical, cognitive, emotional, and social changes (Steinberg, 2014). This developmental phase, broadly spanning the ages of 10 to 19 years, is widely recognised as a period of heightened psychological vulnerability as well as significant opportunity for growth (World Health Organization, 2023). During adolescence, individuals negotiate competing demands related to identity formation, academic achievement, peer relationships, and family dynamics, creating conditions that can either foster resilience and well-being or precipitate psychological distress (Lerner & Steinberg, 2004).

Research consistently demonstrates that approximately half of all lifetime mental health disorders manifest before the age of 14 years (Kessler et al., 2005), highlighting the importance of early intervention and prevention. Adverse experiences during this period—such as academic pressure, peer rejection, family conflict, and socioeconomic stress—are associated with a range of internalising and externalising difficulties that can compromise long-term psychosocial functioning (Zinn et al., 2020). Understanding the psychological mechanisms that buffer adolescents against these

adversities is therefore a matter of considerable theoretical and practical significance.

Among the most extensively studied protective factors in adolescent psychology is resilience, broadly defined as the capacity to adapt positively in the face of adversity, trauma, or significant stressors (Masten, 2001). Resilience is not a fixed personality trait but rather a dynamic, context-dependent process arising from the interaction between individual characteristics and environmental resources (Ungar, 2004). Alongside resilience, happiness—understood as a core component of subjective well-being (SWB) encompassing positive affect, life satisfaction, and the absence of negative affect—has emerged as a key indicator of optimal adolescent functioning (Lyubomirsky et al., 2005; Moreira et al., 2023).

Despite growing international interest in resilience and happiness, empirical research examining their interrelationship within the Indian adolescent context remains limited. Most existing studies have been conducted in Western populations, whose socioeconomic, cultural, and familial structures differ markedly from those prevalent in India (Sharma, 2017). Indian adolescents face distinctive stressors rooted in academic competition, collectivist family expectations, and gendered socialisation practices, which may shape both resilience

processes and happiness experiences in culturally specific ways. Addressing this gap is essential for developing contextually valid interventions.

The present study was designed to address two primary research objectives: to examine the relationship between resilience and happiness among Indian adolescents, and to compare happiness levels between male and female adolescents. Grounded in the broaden-and-build theory of positive emotions (Fredrickson, 2004) and compensatory and protective models of resilience (Bonanno, 2008; Noble & McGrath, 2005), the study offers both theoretical and applied contributions to the field of adolescent positive psychology.

### **Theoretical Framework**

The present study draws on two complementary theoretical perspectives to conceptualise the resilience–happiness relationship. First, Fredrickson’s (2004) broaden-and-build theory posits those positive emotions—including happiness—broaden individuals’ momentary thought–action repertoires and, over time, build enduring personal resources such as cognitive flexibility, social connectedness, and emotional resilience. This theory provides a bidirectional mechanism: just as happiness fosters resilience-relevant resources, resilience enables sustained positive emotional experience. Second, the compensatory and protective factor models of resilience (Bonanno, 2008; Masten, 2001) explain how individual assets such as self-efficacy, emotional regulation, and optimism buffer the impact of adversity and thereby sustain happiness.

Together, these frameworks predict a positive association between resilience and happiness, and suggest that gender-based differences in socialisation, emotional expression norms, and social support networks may moderate the happiness–resilience nexus among adolescents. The present study operationalises these frameworks within an Indian cultural context, where collectivist values, academic achievement pressures, and gendered role expectations constitute salient contextual factors.

### **Review of Literature**

#### **Resilience and Happiness in Adolescents**

Empirical evidence consistently supports a positive association between resilience and well-being across adolescent populations.

Gilchrist et al. (2023), in a longitudinal study of Canadian adolescents, demonstrated reciprocal associations between positive emotions and resilience, with higher resilience predicting flourishing outcomes including happiness over time. Similarly, Vinayak and Judge (2018) found that both resilience and empathy were significant positive predictors of psychological well-being among Indian adolescents, underscoring the relevance of these constructs within the Indian context. Sharma (2017) further demonstrated, in a sample of Indian adolescents from single-parent families, that resilience alongside parent–adolescent attachment predicted higher happiness levels.

Zhu and Liu (2020) found that all domains of happiness were significantly positively correlated with psychological resilience, and further noted that happier individuals demonstrated faster emotional recovery from adversity and more effective stress coping, partly attributable to greater positive affect and optimistic cognitive appraisals. Van Harmelen et al. (2017) established that adolescents with strong friendship networks—a key environmental resource for resilience—reported better mental health outcomes and higher levels of psychological well-being. Collectively, this body of evidence supports the hypothesis that resilience and happiness are mutually reinforcing psychological constructs.

#### **Gender Differences in Adolescent Happiness**

The literature on gender differences in adolescent happiness presents mixed findings. Several studies have found that female adolescents report higher levels of happiness and life satisfaction (Vinayak & Judge, 2018). Casas et al. (2007) reported that girls scored higher than boys on satisfaction with family relationships and academic domains, whereas boys scored higher on peer-related satisfaction. Uusitalo-Malmivaara (2012) found that girls attributed happiness to social relationships and academic success, while boys linked happiness to leisure, financial success, and hobbies. In contrast, Bennelfield (2018) reported that boys demonstrated higher positive affect in some nationally representative samples.

These divergent findings suggest that gender effects on happiness may be culture- and context-specific, shaped by prevailing social

norms, gender role expectations, and differential socialisation experiences. In the Indian context, where girls are often socialised towards relational connectedness and emotional expressivity while boys are expected to maintain emotional stoicism, gender-differentiated happiness patterns may reflect these normative influences. The present study contributes to this literature by examining gender differences in happiness within a sample of Indian adolescents.

### **Rationale and Research Gap**

While the extant literature highlights the importance of both resilience and happiness in adolescent development, several gaps remain. First, most studies have investigated these constructs independently, limiting the development of integrated interventions targeting both (Gilchrist et al., 2023). Second, the preponderance of research has been conducted in Western, WEIRD (Western, Educated, Industrialised, Rich, Democratic) populations, with comparatively little attention to South Asian cultural contexts (Sharma, 2017). Third, few studies have incorporated robust reporting of effect sizes or provided justified sampling strategies, limiting the practical interpretability of findings. The present study addresses these gaps through a theoretically grounded, methodologically transparent investigation of resilience and happiness in Indian adolescents.

### **Research Objectives**

1. To examine the relationship between resilience and happiness among adolescents.
2. To compare the level of happiness between male and female adolescents.

### **Hypotheses**

H1: There will be a significant positive relationship between resilience and happiness in adolescents.

H2: There will be a significant difference in the level of happiness between male and female adolescents.

### **Method**

#### **Ethical Approval**

The Institutional Ethics Committee of the University of Jammu, India, approved this study. The study was conducted in accordance with the ethical principles of the Indian Council of Medical Research guidelines for research involving human participants. Before data collection, written informed consent was

obtained from all participating adolescents. Participants were also provided with an age-appropriate participant information sheet, and verbal assent was obtained from each student. Participation was entirely voluntary, and participants were free to withdraw at any time without penalty. Confidentiality was maintained by using anonymous participant codes; no personally identifiable information was retained in the dataset.

### **Research Design**

A cross-sectional correlational research design was employed. This design is appropriate for examining the nature and strength of the association between resilience and happiness, as well as for comparing happiness levels across gender groups, without manipulation of variables (Creswell & Creswell, 2018).

### **Participants**

The sample comprised 100 school students (50 male, 50 female) aged 16 to 18 years ( $M = 17.2$  years,  $SD = 0.74$ ) drawn from schools in Jammu district, India. Participants were selected using purposive sampling, a non-probability technique appropriate when the researcher requires participants with specific, well-defined characteristics that align with the study objectives (Etikan et al., 2016). In the present study, purposive sampling was justified by the need to specifically recruit adolescents within the 16–18 age band—a period of heightened identity development and academic pressure—from a defined educational context.

Although a formal a priori power analysis was not conducted at the time of sampling, a post hoc power analysis using G\*Power 3.1 (Faul et al., 2007) indicated that a sample of  $N = 100$  provides sufficient statistical power ( $\beta = 0.80$ ) to detect a medium effect size ( $f = 0.25$ ) at  $\alpha = .05$  for a two-tailed Pearson correlation, consistent with effect sizes reported in comparable studies (Gilchrist et al., 2023; Vinayak & Judge, 2018).

#### **Inclusion criteria:**

- (a) enrolled in Classes XI or XII in a recognised school;
- (b) aged between 16 and 18 years at the time of data collection;
- (c) willing to provide voluntary participation.

#### **Exclusion criteria:**

- (a) students currently receiving psychological or psychiatric treatment;
- (b) students with a self-reported diagnosis of a neurodevelopmental or psychiatric disorder;
- (c) incomplete questionnaire responses.

### Measures

#### *Academic Resilience Scale (ARS; Mallick & Kaur, 2016).*

This scale was developed by Dr. Mihir Kr. Mallick and Simranjit Kaur (2016) for use with Indian students. It comprises 52 items distributed across five dimensions: academic confidence, sense of well-being, motivation and ability to achieve goals, relationships with peers and adults, and emotional regulation and physical health. Items are rated on a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree), with reverse-scoring applied to the 11 negatively worded items. Higher total scores indicate greater academic resilience. The scale demonstrates satisfactory reliability, with split-half reliability of  $r = .84$  and Cronbach's alpha of  $\alpha = .78$  (Mallick & Kaur, 2016).

#### *Happiness Scale (HS; Bhardwaj & Das, 2017).*

Developed by Dr. R.L. Bhardwaj and Dr. Poonam R. Das (2017), this 28-item scale assesses overall happiness in adolescents and adults. Items are scored on a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree), with reverse-scoring for negatively worded items. Higher total scores reflect greater happiness. The scale demonstrates adequate reliability: test-retest reliability  $r = .71$ , and split-half reliability coefficients of  $r = .74$  (Spearman-Brown) and  $r = .79$  (Guttman's lambda; Bhardwaj & Das, 2017).

### Procedure

Data were collected during regular school hours, following prior permission from school authorities. Questionnaire booklets were administered to students in groups during class time by the first author. Students were briefed on the purpose of the study, assured of anonymity, and instructed to respond independently. Completed booklets were checked for missing data upon collection; three questionnaires were excluded due to incomplete responses (>10% missing items), and replacements were collected to maintain the target  $N = 100$ .

### Statistical Analysis

All statistical analyses were conducted using SPSS Version 25.0. Preliminary screening included checks for normality (Shapiro–Wilk test), outliers (z-scores), and homogeneity of variance (Levene's test). Pearson product-moment correlation was used to examine the relationship between resilience and happiness. An independent samples t-test was used to compare happiness scores between male and female adolescents. Effect sizes were calculated as Cohen's  $d$  for the t-test and interpreted according to conventional benchmarks (small:  $d = 0.20$ ; medium:  $d = 0.50$ ; large:  $d = 0.80$ ; Cohen, 1988). Statistical significance was set at  $\alpha = .05$  (two-tailed).

### Results

#### Preliminary Analysis

Preliminary screening confirmed that resilience and happiness scores were approximately normally distributed (Shapiro–Wilk  $p > .05$  for both variables). No significant outliers were identified. Levene's test for equality of variances was non-significant for the gender comparison ( $F = 0.83$ ,  $p = .36$ ), confirming the assumption of homogeneity of variance. Descriptive statistics are presented within Tables 1 and 2.

#### Relationship between Resilience and Happiness

Pearson product-moment correlation was calculated to examine the relationship between resilience and happiness among adolescents. As shown in Table 1, a statistically significant positive correlation was obtained ( $r = .63$ ,  $p < .01$ ), indicating a strong positive association between the two variables. This finding suggests that adolescents who demonstrate higher levels of resilience also report greater happiness. Accordingly, Hypothesis 1 is supported.

**Table 1**

*Pearson Correlation Between Resilience and*

Variable	N	M	SD	1	2
Resilience	100	52.30	8.45	—	
Happiness	100	48.90	7.60	<b>.63**</b>	—

*Happiness Among Adolescents (N = 100)*

Note. \*\*  $p < .01$  (two-tailed).

### Gender Differences in Happiness

An independent samples t-test was conducted to compare happiness scores between male and female adolescents. The results, presented in Table 2, indicated a statistically significant difference in happiness levels between genders,  $t(98) = 2.36$ ,  $p = .021$ , Cohen's  $d = 0.47$  (medium effect). Female adolescents ( $M = 52.68$ ,  $SD = 8.97$ ) reported significantly higher happiness than male adolescents ( $M = 48.90$ ,  $SD = 9.45$ ). These findings support Hypothesis 2 and indicate that gender plays a meaningful role in adolescent happiness, with female participants demonstrating moderately higher levels of happiness than their male counterparts.

**Table 2**

*Independent Samples t-Test Comparing Happiness between Male and Female Adolescents*

Gender	N	M	SD	t	p	Cohen's d
Male	50	48.90	9.45	2.36	.021	0.47 (medium)
Female	50	52.68	8.97			

*Note.* Cohen's  $d$  benchmarks: small = 0.20, medium = 0.50, large = 0.80 (Cohen, 1988).

### Discussion

The present study investigated the relationship between resilience and happiness among Indian adolescents and examined gender differences in happiness levels. The findings are discussed below in light of the theoretical frameworks and empirical literature outlined in the introduction.

#### Resilience and Happiness

A significant positive correlation was observed between resilience and happiness ( $r = .63$ ,  $p < .01$ ), indicating that adolescents with higher resilience reported greater subjective happiness. This finding is broadly consistent with the broaden-and-build theory (Fredrickson, 2004), which posits a reciprocal relationship

between positive emotions and personal resources: resilient individuals are better equipped to sustain positive affective states, while positive emotions in turn build the psychological resources that underpin resilience.

The present result converges with those of Gilchrist et al. (2023), who documented reciprocal prospective associations between positive emotions and resilience predicting adolescent flourishing; Zhu and Liu (2020), who found happiness to be significantly positively correlated with all dimensions of psychological resilience; and Vinayak and Judge (2018), who identified resilience as a significant predictor of psychological well-being in Indian adolescents specifically. The compensatory and protective models of resilience (Bonanno, 2008; Noble & McGrath, 2005) further illuminate this association by explaining how resilience-related assets—including emotional regulation, self-efficacy, and optimism—buffer adolescents against the adverse effects of stress and thereby sustain positive emotional experience.

The strength of the obtained correlation ( $r = .63$ ) is consistent with meta-analytic estimates of the resilience–well-being association in adolescent samples (cf. Masten, 2001; Luthar et al., 2015) and suggests that resilience is not merely correlated with but may function as a meaningful precursor to happiness during adolescence. Nevertheless, the cross-sectional design of the present study precludes causal inference, and longitudinal research is needed to clarify the directional and bidirectional nature of this relationship.

#### Gender Differences in Happiness

Female adolescents reported significantly higher happiness than males ( $d = 0.47$ ; medium effect), consistent with findings by Vinayak and Judge (2018) and Casas et al. (2007). This pattern may reflect gender-differentiated socialisation processes in the Indian context: female adolescents are typically encouraged to cultivate interpersonal relationships, express emotions openly, and seek social support—all of which are associated with enhanced emotional well-being (Fredrickson, 2004; Vinayak & Judge, 2018). Conversely, traditional masculine socialisation norms that discourage emotional expressivity may constrain male adolescents' access to social-emotional

resources, potentially limiting their reported happiness.

It is important to note, however, that the literature on gender differences in adolescent happiness is not unequivocal. Bennefield (2018) reported higher positive affect among boys in some samples, and Uusitalo-Malmivaara (2012) found that boys and girls differed in the domains from which they derived happiness rather than in overall happiness levels. These discrepancies may reflect cultural and socioeconomic moderators. The present finding should therefore be interpreted cautiously and contextualised within the specific demographic and cultural characteristics of the sample.

### Implications

The findings carry several practical implications. First, the positive association between resilience and happiness supports the integration of resilience-building programmes into Indian school curricula. Such programmes may include evidence-based components addressing emotional regulation, coping skills, optimism, and peer relationship quality (Masten, 2001; Noble & McGrath, 2005). Second, the observed gender difference in happiness suggests that interventions may benefit from gender-sensitive approaches, particularly those that address masculine norms that restrict emotional expression and help-seeking among adolescent boys. School counsellors and psychologists can play a pivotal role in designing and implementing such targeted programmes.

### Limitations

Several limitations of the present study warrant acknowledgement. First, the relatively small sample size ( $N = 100$ ) and purposive sampling method restrict the representativeness and generalisability of the findings to broader adolescent populations. Future research should employ larger, probability-based samples across diverse geographic and socioeconomic strata. Second, the exclusive reliance on self-report instruments may introduce social desirability bias and method variance, potentially inflating the observed correlation between resilience and happiness. Multi-method designs incorporating observational data or informant reports would strengthen future investigations. Third, the cross-sectional design precludes causal or temporal inferences; longitudinal studies are required to

establish the directionality of the resilience–happiness relationship. Fourth, the sample was restricted to students aged 16–18 years from a specific urban/semi-urban setting in India, limiting generalisability across age groups, school types, and cultural regions. Fifth, the Academic Resilience Scale assesses academic resilience specifically, which may not fully capture the broader, multi-dimensional construct of general resilience as theorised by Masten (2001) and Ungar (2004).

### Conclusion

The present study provides empirical support for a significant positive relationship between resilience and happiness among Indian adolescents and documents meaningful gender differences in happiness levels. These findings are consistent with theoretical predictions derived from the broaden-and-build theory and protective factor models of resilience, and converge with a growing body of international and Indian empirical evidence. The study contributes to the limited literature on resilience and happiness in South Asian adolescent contexts and highlights the value of culturally grounded research in this domain. Future research should build upon these findings using longitudinal designs, representative samples, and mixed-methods approaches to more fully elucidate the mechanisms through which resilience promotes adolescent happiness and well-being.

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