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## Resilience among Undergraduate First-Year Students: The Differential Effects of Gender, and Socioeconomic Status

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## RESEARCH ARTICLE

# Resilience among Undergraduate First-Year Students: The Differential Effects of Gender, and Socioeconomic Status

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## ABSTRACT

Resilience, as a multidimensional psychological construct, may vary with respect to personal characteristics such as gender and social context like socio-economic status, particularly in the Indian context. The researchers aim to explore the effects of gender (male and female) and socioeconomic status (low, moderate & high) on resilience and further investigate whether the effect of gender is independent of different levels of SES. The quantitative survey study included 490 first-year undergraduates ( $M = 18.97$ ,  $SD = .83$ ) from three districts of West Bengal. The questionnaire comprised socio-demographic data and the adapted Bengali version of the Connor-Davidson Resilience Scale (CD-RISC). The results showed that male students reported a significantly higher level of resilience than female students, with an effect size accounting for approximately 2% of the variance which is considered a “small” effect size. Additionally, the effect of SES was also small, explaining 1.5% of the variance in resilience. Tukey’s HSD showed a significant mean difference only between the high and moderate SES groups. Moreover, the interaction between gender and SES was insignificant implying that the effect of gender on resilience was independent of SES or vice versa. It was suggested that gender-specific interventions focusing on strengthening resilience and promoting social support are needed for first-year college students.

**Keywords:** Resilience, Gender, Socio-Economic Status (SES), First-Year college students, Connor-Davidson Resilience Scale (CD-RISC)

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# المرونة بين طلاب السنة الأولى الجامعيين: التأثيرات التفاضلية للجنس والحالة الاجتماعية والاقتصادية

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## الملخص

تُعد المرونة مفهومًا نفسيًا متعدد الأبعاد قد يختلف وفقًا للخصائص الشخصية مثل الجنس والحالة الاجتماعية والاقتصادية تحديدًا في المجتمع الهندي. تهدف الدراسة إلى استكشاف تأثير الجنس (ذكور وإناث) والحالة الاجتماعية والاقتصادية (منخفضة، متوسطة، وعالية) على المرونة، بالإضافة إلى دراسة الفرق بين تأثير الجنس وتأثير مستوى الحالة الاجتماعية والاقتصادية. تكونت عينة الدراسة المسحية الكمية من 490 طالبًا جامعيًا في السنة الأولى ( $M = 18.97$ ,  $SD = .83$ ) من ثلاث مناطق في ولاية غرب البنغال. تضمن الاستبانة بيانات اجتماعية - ديموغرافية والنسخة البنغالية المعدلة من مقياس كونور- ديفيدسون للمرونة (CD-RISC). أظهرت النتائج أن الطلاب الذكور يتمتعوا بمستوى مرونة عالية مقارنة بالطلبات، مع حجم تأثير حوالي 2% من التباين وهو ما يعتبر تأثير ضعيف. بالإضافة إلى ذلك، كان تأثير الحالة الاجتماعية والاقتصادية ضعيفًا، وهو ما يعني 1.5% من التباين في المرونة. أظهر اختبار HSD لتوكي فرقًا كبيرًا في المتوسط الحسابي فقط بين المجموعات ذات الحالة الاجتماعية والاقتصادية العالية والمتوسطة. علاوة على ذلك، لم يكن التفاعل بين الجنس والحالة الاجتماعية والاقتصادية ذا دلالة إحصائية، مما يعني أن تأثير الجنس على المرونة كان مستقلًا عن الحالة الاجتماعية والاقتصادية أو العكس. أوصت الدراسة بتدخلات تراعي الفروق بين الجنسين، مع التركيز على تعزيز المرونة ودعم المجتمع لطلاب السنة الأولى الجامعيين.

**الكلمات المفتاحية:** المرونة، الجنس، الحالة الاجتماعية والاقتصادية، طلاب السنة الأولى الجامعيين، مقياس كونور ديفيدسون للمرونة

## Introduction

The academic transition phase, i.e., school education to higher education (i.e., college or university) is characterized as one of the most critical and challenging stages of adjustment. Adjustment for college or university students is not just confined to academic settings but extends to psychosexual, social, emotional, and even spiritual spheres (Herbert & Manjula, 2017). It is difficult since they are not used to dealing with “not-answerable” freedom such as bunking class and hanging around. Some students residing in hostels for the first time are homesick. As per the MMT (Multiple and Multidimensional Transition) theory, first-year students experience multiple transitions simultaneously including academic, relationship, geographical, developmental, and identity-transitions (Jindal-Snape, 2023; Jindal-Snape & Rienties, 2016). They are unable to manage social support when they are particularly vulnerable to experiencing stress, anxiety, and depression (Dyson & Renk, 2006; Himmel, 2015; Park et al., 2012). Nevertheless, the challenges they encounter may have a differential effect. Some students respond well, while others are susceptible to psychological issues. For instance, 42.5% of the first-year Ethiopian undergraduates reported adjustment difficulties (Ababu et al., 2018). In India, researchers reported unsatisfactory social and emotional adjustment and above-average stress among first-year students in comparison to final-year students (Maheswari & Kumar, 2015; Ramteke & Ansari, 2016; Sharma, 2012), but resilient undergraduate students experience less adjustment difficulty, less stress, and depression (e.g., Galante et al., 2018; Haktanir et al., 2018; Kahn, 2016; Kamble, 2015; Kapıkıran & Acun-Kapıkıran, 2016) and hence positively improve their academic persistence in college life. Therefore, the resilience of college students needs to be given importance in general and especially for freshers as it is the quality of a person or context that predicts positive outcomes under high-risk conditions (Himmel, 2015; Masten, 2001).

Resilience is a set of characteristics that allows individuals to thrive in adversity (Connor & Davidson, 2003). It is not inherent rather it is an achievable ability (Masten, 2001). Further resilience is treated as a dynamic interactive complex process of various factors like genetics, biological, psychological, etc (Cicchetti, 2010; Luthar et al., 2000; Masten & Barnes, 2018). The concept of ego-resilience is worth mentioning as it pertains to personal characteristics such as the ability to adjust to changes and help bounce back from difficult situations. (Garcia-Blanc et al., 2023; Luthar et al., 2000; Sætren et al., 2019). The American Psychological Association (APA, 2010)

explains resilience not as a trait that people either have or not, it involves behavior, thoughts, and actions that can be learned and developed in anyone. Hence, it is important to know whether the treatment or developmental program of resilience should be similar across demographic differences of participants. Researchers documented that resilience varies with personal characteristics like age, context, stages of development gender, etc. (Connor et al., 2003; Fergus & Zimmerman, 2005; Gonzalez-Torres & Artuch-Garde, 2014; Luthar et al., 2000). In particular, gender inequalities can lead to significant disparities in achievement and access to opportunities between men and women (Jose & Sivaraman, 2023)

Gender inequalities are prevalent in India, yet women have made notable progress in higher education, outperforming men in the Gender Parity Index (GPI) at the undergraduate level (Ghosh & Kundu, 2021). Despite this advancement, many women still encounter skill disparity, often relegated to low-skill, low-paying informal jobs (Kumar, 2022). Gender inequality can lead to increased stress, anxiety, depression, and post-traumatic stress disorder (PTSD) among women (Villines, June 23, 2021). Adolescent girls in India (Chaturvedi et al., 2021) and Belgium (Van Droogenbroeck et al., 2018) experienced negative emotions such as fear, anxiety, guilt, and depression. In the Middle East, women experience anxiety and depression more frequently than men, who tend to have more “externalizing” problems (Ghuloum, 2013). According to Abdel-Khalek and Alansari (2004), undergraduate females in ten Arab countries, including Oman, showed greater anxiety levels than their male counterparts. Further, male students were comparatively better in self-esteem and assertiveness (Arshad et al., 2015; Sharma et al., 2022). Women, on the other hand, showed higher levels of extraversion, cooperation, and nurturing attitudes (Sharma et al., 2022). All these psychological differences may cause resilience to differ.

The results of empirical research on the effect of gender on resilience were inconsistent. While some studies including Indian studies reported that female college students had a higher level of resilience than males (e.g., Anasuri & Anthony, 2018; Biswas, 2021; Johnson et al., 2011; Tantry & Puri-Singh, 2017), while other studies reported in favor of male (Bahadir-Yilmaz & Oz, 2015; Erdogana et al., 2015). Furthermore, some studies reported the insignificant contribution of gender to resilience in various cultures (e.g., Arı & Çarkıt, 2020; Coşkun et al., 2014; Gonzalez-Torres & Artuch-Garde, 2014; Keshavarzi & Yousefi, 2012; Keshtegar & Jenaabadi, 2015; Mag-nano et al., 2016). It should also be considered that gender differences have an effect through culture

and processes of socialization and that they can contribute to differences in the indicators of resilience and coping that can influence how males and females cope with stressful situations using coping resources (Gonzalez-Torres & Artuch-Garde, 2014; Johnson et al., 2011). However, the outcomes of the literature may differ due to multiple operationalizations of resilience. Like, the Resiliency Scale developed by Gürgen (2006) favored males, whereas the Resilience scale for adults (RSA) developed by Friberg et al. (2003) and the Connor-Davidson Resilience Scale (CD-RISC) by Connor and Davidson (2003) favored females. Therefore, researchers here attempted to explore the effect of gender on resilience (CD-RISC) among first-year students in the Indian cultural context. The lack of consensus on gender disparities in several literatures itself creates a knowledge gap for further exploration.

Apart from gender, socioeconomic status (SES) in terms of education, occupation, and income, i.e., family's resources is considered one of the most significant factors in research on physical health issues, mortality, and psycho-social well-being (Angell, 1993; Kaplan et al., 2008; Sharma & Kermane, 2015; Wang & Geng, 2019). The availability of these resources can help to deal with adversities in terms of daily necessities and treatment. It is empirically proven that college students from higher SES groups were less anxious, and depressed than those from the lower SES groups (Dong et al., 2021). When it comes to Indian college students, high SES groups were similarly observed to have superior mental health than low SES ones (Chaurasia, 2018; Ibrahim et al., 2012). Although this favorable effect of SES on psychological well-being is not conclusive as non-significant effects of SES have also been reported (i.e., Panth & Chaurasiya, 2015). Coşkun et al. (2014) found that parental education level was positively associated with students' resilience. Rodgers and Rose (2002), on the other hand, showed that students with less educated mothers had higher resilience scores than their peers with more highly educated mothers. Further, household income was both positively as well as adversely associated with resilience (Hardy et al., 2004; Machuca, 2010; Wells, 2010). Researchers claim that low SES status may lead to better handling of adult challenges as well as pushing them to be more resourceful and for avoiding danger (Mokoena, 2010), and hence they become adjusted to life's adversities and thus become resilient (Fovet, 2011). Furthermore, SES was proven to be ineffective in Indian culture, particularly for college students (Karmalkar & Vaidya, 2018; Khare et al., 2017). Considering the existing literature concerning SES as a protective or risk factor for resilience remains unclear and

contentious, hence further clarification is sought especially for first-year undergraduates in an Indian context.

Resilience is thought to involve a complicated interplay of human qualities and societal exposure. The resilience process may differ between males and females depending on their socioeconomic status. Males' risk tolerance is unaffected by their socioeconomic status, but females' risk tolerance is significantly affected (Alan et al., 2013). It was reported that parents in low-income families are more likely to mentor and interact with girls than with boys (Baker & Milligan, 2016; Bertrand & Pan, 2013). However, in India, the majority of male adolescents from upper SES and the majority of female adolescents from middle SES reported moderate academic frustration and anxiety (Fatma et al., 2018). An Indian-based survey found that sons are preferred by mothers across the country irrespective of economic condition, but mothers with higher educational levels had low son preference (Pande & Malhotra, 2006). Hence family condition (i.e., SES level) and personal genetic characteristics (i.e., gender-male, female) may have varied effects on resilience in college students. Although one study reported that neither gender nor SES, and nor their combinations, have any significant effect on resilience of the first-year psychology students in South Africa (Mokoena, 2010). Hence, there is a paucity of research on first-year undergraduate students, especially in the Indian cultural context. The present study, therefore, seeks to investigate the interactive effect of gender and SES on resilience.

### *Present study*

The current Indian scenario due to globalization and industrialization creates a mixed culture where lifestyle and livelihood are different among poor and rich people. Along with existing earlier male dominating culture, the role of gender is changing, i.e., males and females both are working, and both are taking responsibility for their families. On the other hand, single children, single parents, divorce, and the nuclear family are the modern characteristics of Indian culture. In these structurally changing circumstances in India, gender and SES independently and interactively may have a significant effect. Further, India is a developing country with the world's largest young population and a distinctive family culture, it is critical to include SES level in the study of the interpretation of gender differences in resilience among Indian college students in the transition phase, which was not much explored earlier. Thus, the researchers seek to explore two research questions.

1. Does the students' gender (male, female) and their levels of socioeconomic status (low, moderate & high) have significant effects on their resilience?
2. Whether the effect of students' gender (male, female) on their resilience significantly independent of the effect of their levels of socioeconomic status?

## Method

### Study design

The researchers adopted a quantitative survey research design which allows for a variety of methods of recruiting participants and utilizes various methods of instrumentation. It is often used to describe and explore human behaviour, surveys are therefore frequently used in social and psychological research (Singleton & Straits, 2009 as cited in Ponto, 2015)

### Participants and settings

The participants were drawn from three districts (South and North 24 Parganas and Kolkata) of West Bengal, the Eastern part of India. Yamane's formula (1967) [ $n = N/1 + N(e^2) = 28345800/1 + 28345800(.05^2) = 399.99 = 400$ ] ensures a total number of 400 samples for proper representation of the population of first-year undergraduate students. The number of participants was increased to 500 for more precision. The initial sample covered five hundred ( $n = 500$ ) willing first-year undergraduate students (273 male and 227 female) from eleven undergraduate colleges and two undergraduate sections of a state's university. 10 of the participants were excluded for outliers detected using a box plot, hence the final sample constituted 490 participants (270 males and 220 females, aged 18 to 21 years,  $M = 18.97$ ,  $SD = 0.83$ ). Sample details are shown in Table 1.

### Instrument

#### Demographic information

To gather demographic information about the first-year students, a self-administered questionnaire was utilized. The questionnaire comprises a demographic information sheet attached to the Connor-Davidson Resilience Scale (CD-RISC); Connor & Davidson, 2003). The questionnaire covered various demographic information, such as age, gender (i.e., male and female), academic stream, and Socio-Economic Status (SES) information in terms of education,

**Table 1.** Characteristics of the participants.

Characteristics	<i>n</i>	%
Districts		
Kolkata	250	51.02
South 24 Parganas	169	34.49
Nouth 24 Parganas	71	14.49
Gender		
Male	270	55.10
Female	220	44.89
Socio Economic Status		
High	114	23.26
Moderate	246	50.20
Low	130	26.53
Academic Stream		
Arts	197	40.20
Science	194	39.59
Commerce	99	20.20
Course		
Honors	371	75.71
General	119	24.29

occupation, and income of the family's primary breadwinner (Sood & Bindra, 2022).

### Connor-Davidson resilience scale (CD-RISC, 2003)

The Connor-Davidson Resilience Scale (CD-RISC) was adapted to measure resilience. The scale was originally developed by K. M. Connor and J. R. T. Davidson (2003). The scale contains 25 items with a 5-point rating scale, i.e., "not true at all" (0), "rarely true" (1), "sometimes true" (2), "often true" (3), and "true nearly all of the time" (4). The score ranges from 0-100, with higher scores reflecting greater resilience. The resilience of the first-year students was measured in terms of five factors, (i) Personal competence, high standards, and tenacity, (ii) Trust in one's instincts, tolerance of negative affect, and strengthening effects of stress, (iii) Positive acceptance of change and secure relationships, (iv) Control (v) Spiritual influences. Cronbach's alpha reliability for the original full scale was 0.89 and item-total correlations ranged from 0.30 to 0.70.

### Translation and standardization of the instrument

Due to the language barrier, the measuring instrument was translated into Bengali language with permission from the developer. Blind-back translation (Brislin, 1970) from English to Bengali and Bengali to English was done by bilingual scholars. Experts independently evaluated all the items for literal and conceptual accuracy and revisions were made according to their recommendations. The final version was finalized based on the consensus of the interrater agreement on conceptual similarities between the original English and translated Bengali

versions. Hence the final questionnaires were finalized in Bengali form. A pilot study was conducted for tools standardization comprising 100 students. Cronbach alpha for the adopted CD-RISE scale was 0.81 and item-total correlations ranged from 0.20 to 0.65.

### Procedure

All the students were from general academic streams (BA/B. Com/B.Sc.) not from professional or vocational courses or medical or engineering backgrounds. The data were collected by the researcher himself in normal classroom conditions. After the approval of the Research Advisory Committee (RAC), University of Calcutta the study was conducted. The permission was sought from concerned institutional authorities and the participants in written format. Participants signed the informed consent form that included a brief explanation of the research, the purpose of the study, privacy, and confidentiality aspects, including the researcher's contact information. Participants who signed the consent form were completed the survey in classroom settings.

### Data analysis

Normality, homoscedasticity of the data, and descriptive and inferential statistical analysis were conducted using SPSS (version 14.0). t-test and factorial ANOVA followed by Tukey's HSD (honest significance test) was performed to know the main and interaction effect of gender and SES.

### Normality

The normality of data was ensured by Skewness (Sk) and Kurtosis (Ku) and the z-score of Sk and Ku. Further, the Kolmogorov-Smirnov test was shown.

**Skewness and Kurtosis.** Table 2 showed that SK and KU were 0.127 and  $-0.305$  respectively which are accepted according to Kline (1998) ( $Sk < 3, Ku < 10$ ) (as cited in Evrekli et al., 2010, p. 191) and West et al. (1995) ( $Sk < 2, Ku < 7$ ). Z score ( $Sk$  or  $Ku/SE$ ) of Sk and Ku were  $-1.15$  and  $1.39$  respectively, both within  $\pm 1.96$  limits, suggesting that the CD-RISC score is likely to be normally distributed (Kim, 2013).

**Table 2.** Skewness and kurtosis of resilience score (CD-RISC).

CD-RISC	
Sk	$-0.127$
$Z = Sk/SE$ of Sk	$-0.127/.110 = -1.15$
Ku	$-0.350$
$Z = Ku/SE$ of Ku	$-0.350/0.220 = -1.59$

**Table 3.** Normality and homogeneity of variance of data for gender (male, female) and SES (low, moderate, and high).

Kolmogorov-Smirnov			
	Statistic	df	p
Gender			
Male	0.052	270	<b>0.077</b>
Female	0.051	220	<b>0.200</b>
SES			
Low	0.089	130	0.014*
Moderate	0.038	246	<b>0.200</b>
High	0.079	114	<b>0.077</b>
Total Resilience	.036	490	<b>.164</b>
Homogeneity of variance			
F	df1	df2	p
1.663	5	484	<b>0.142*</b>

Notes: \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$ .

Note. Bold indicated non-significant results

**Kolmogorov-Smirnov Test.** We detected a non-significant ( $p > 0.05$ ) result of Kolmogorov-Smirnov test (Table 3). This insignificant result ensured the assumption of normality of overall resilience data as well as gender (male and female) and three SES levels (low, moderate, and high) wise data.

### Homogeneity of variance

Non-Significant Levene's test of equality of variance ( $F(5, 484), 1.663, p. 0.142 > 0.05$ ) (Table 3) ensured the homogeneity of variance of the data across the groups.

## Results

Means and standard deviations (Table 4) were calculated for the new Bengali version of the Connor-Davidson Resilience Scale (CD-RISC) data based on gender (male = 1, female = 0) and SES (low = 1, moderate = 2, and high = 3).

**Table 4.** Mean and SD of the resilience of the students.

Gender	SES	M	SD
Male	Low ( $n = 77$ )	70.17	9.853
	Moderate ( $n = 139$ )	69.24	11.100
	High ( $n = 54$ )	71.48	9.589
	Total ( $n = 270$ )	69.96	10.464
Female	Low ( $n = 53$ )	68.55	11.046
	Moderate ( $n = 107$ )	65.07	9.035
	High ( $n = 60$ )	68.67	11.634
	Total ( $n = 220$ )	66.89	10.397
Total Sample	Low ( $n = 130$ )	69.51	10.345
	Moderate ( $n = 246$ )	67.43	10.441
	High ( $n = 114$ )	70.00	10.760
	Total ( $N = 490$ )	68.58	10.534

**Table 5.** Result of 't' test for resilience and gender (male, female).

	Gender (N = 490)	Mean	S.D	"t" values	df	P value	Cohen's d
Resilience	Male (N = 270)	69.96	10.464	3.234	488	.001**	0.29
	Female (N = 220)	66.89	10.397				

\*\*Significance in 1% level.

**Table 6.** Result of ANOVA for resilience and SES (Low, Moderate, and High).

Variables	Sum of squares	df	Mean square	F	p	$\eta^2$
Resilience	849.026	2	424.513	3.870	.021*	.016

Note. \*mean difference significance at 05% level.

To answer the first question of this study: (Q1): "Does gender (male, female), and socioeconomic status (SES) (low, moderate, high) have any effect on resilience?", 't' test and one-way ANOVA were used, and the effect size was measured using "Cohen's d". Cohen suggested (1988) that  $d = 0.2$  would be considered a 'small' effect size, 0.5 represents a 'medium' effect size, and 0.8 a 'large' effect size.

The 't' score indicated (Table 5) a significant difference in resilience with respect to gender (Male, Female),  $t(488) = 3.234$ ,  $p = .001$ ,  $d = 0.29$ , showed that only 2.9% variance in total resilience is accounted for gender.

One-way ANOVA followed by Tukey's post-hoc pair-wise analysis was used to know the significant differences in resilience for three levels of SES (low, moderate, and high), and the effectiveness of SES

was also estimated using Eta square ( $\eta^2 = SS_{\text{between}} / SS_{\text{total}}$ ).

ANOVA indicated (Table 6) a significant difference in resilience with respect to three levels of SES,  $F(2,424.513) = 3.870$ ,  $P = .021$ ,  $\eta^2 = .016$ , indicated that only 1.6% variance in total resilience is accounted for SES.

Tukey's HSD showed (Table 7) a significant mean difference of resilience only between high and moderate SES groups (*mean difference*  $\pm 2.85$ ,  $p < 0.05$ ). No significant differences were found between the high and low SES ( $p > 0.05$ ) and moderate and low SES ( $p > 0.05$ ) groups.

To answer the second question, (Q2): "Does gender affect resilience independent of the different levels of SES?", we tested for effects differences on resilience between male and female students, and among the three levels of socioeconomic status (low, moderate, high), by using Factorial Analysis of Variance (ANOVA).

Table 8 showed that gender has a significant effect on resilience,  $F(1, 484) = 8.211$ ,  $p = 0.004$ ,  $\eta^2 = 0.017$ , indicating approximately 2% variance in resilience due to gender alone. The main effect of SES

**Table 7.** Tukey's HSD-test for pairwise comparison.

Dependent variable	(I) SES	(J) SES	Mean difference			95% CL	
			(I - J)	sd	p.	LL	UL
Resilience	Low	Moderate	2.85*	1.137	.033	.18	5.52
		High	.06	1.154	.999	-2.65	2.77
	Moderate	low	-2.85*	1.137	.033	-5.52	-.18
		High	-2.79	1.202	.054	-5.62	.03
	High	Low	-.06	1.154	.999	-2.77	2.65
		moderate	2.79	1.202	.054	-.03	5.62

Note. CL = Confidence interval, LL = Lower limit, UL = Upper limit.

\* $p < 0.05$ .

**Table 8.** Tests of between-subjects effects.

Source	Type III sum of squares	df	Mean square	F	p	$\eta^2$
Corrected model	2025.559	5	405.112	3.753	.002**	.037
Intercept	2042597.401	1	2042597.40	18925.308	.000**	.975
Gender	886.199	1	886.199	8.211	.004**	.017
SES	805.648	2	402.824	3.732	.025*	.015
Gender * SES	139.258	2	69.629	.645	.525	.003
Error	52237.837	484	107.929			
Total	2358812.000	490				
Corrected Total	54263.396	489				

Note.  $R^2 = 0.037$  (Adjusted  $R^2 = 0.027$ ).

\*\* $p < 0.01$ , \* $p < 0.05$ %.

was also significant on resilience,  $F(2, 484) = 3.732$ ,  $p = 0.025$ ,  $\eta^2 = 0.015$ , implying a 1.5% variance in resilience due to SES alone.

The interaction effect of gender and SES was not found to be significant,  $F(2, 484) = 0.645$ ,  $p = 0.525$ , implying that the effect of gender on resilience was independent of SES or vice versa.

## Discussion

### *Effects of gender on resilience*

The current study revealed that gender had a substantial influence on resilience among Indian students, in particular, the results showed that male students reported having a higher level of resilience ( $M=69.96$ ;  $SD=10.46$ ), than female students ( $M=66.89$ ;  $SD=10.39$ ); though, this gender effect on resilience was negligible, specifically, with an effect size that reached 2% of variance in resilience was due to the gender variable. The result was supported (e.g., Erdogana et al., 2015; Johnson et al., 2011; Tantry & Puri-Singh, 2017) as well as contradicted (e.g., Anasuri & Anthony, 2018; Biswas, 2021; Gonzalez-Torres & Artuch-Garde, 2014; Keshavarzi & Yousefi, 2012; Keshtegar & Jenaabadi, 2015; Mokoena, 2010) by existing literature having undergraduate college or university students. Despite the conflicting literature, the present research outcomes in favor of male participants need to be justified based on population and cultural background.

Generally, females experience more problems and challenges in the educational and social circumstances and they are more emotional compared to males, so they may be more affected by traumatic experiences (Erdogana et al., 2015). Females are neurotic by nature (Djudiyah et al., February 19, 2016), which is characterized as negative emotionality. The use of emotional coping mechanisms in the face of difficult situations (Misigo, 2015) makes them vulnerable in stressful situations. On the other hand, males were reported to be less neurotic (Djudiyah et al., February 19, 2016), and characterized as positive, confident, relaxed, and calm. Further, they are distinguished by self-assertion, hardening, and fearlessness (Chaubey & Helode, 2014) hence are not likely to be affected easily by negative emotions. This might justify their higher scores in resilience.

The academic and social surroundings of the higher educational institution are quite different from the earlier school environment. Students must be independent, self-directed, and self-motivated in the higher education setting. Nobody is going to prompt me about what to do or not. In the academic transition phase, undergraduate students enter the higher education system from various cultural backgrounds

with personal beliefs, values, experiences, and expectations (Dong & Cole, May 24, 2011; Pascarella & Terenzini, 2005). In this transition phase, male students face fewer problems than females in dealing with adverse situations, as male students are found to be more adjustable than females regardless of living environment (Enochs & Roland, 2006; Sharma & Saini, 2013), even in the adverse emotional conditions (Raju & Rahamtulla, 2007). College-going female students are observed to be more unsatisfactorily adjusted, compared to males (Agarwal et al., 2017). Henceforth, the differences in adjustability and personal characteristics among male and female undergraduate students might justify the considerable difference in resilience in favour of the males.

Society is still dominated by male counterparts especially in the Indian context (Sarkar, 2015). Research reported that in northern, central, and eastern areas of India, discrimination against women and girls is most prevalent (Kaul, 2018). Consciously and unconsciously the mindset and attitudes of gender discrimination exist within communities and institutions that continue to affect girls' lives (Landry et al., 2020). In comparison to affluent countries such as the United States, Indian culture is more discriminatory, and as a result, women on average are still lagging in many fields, including enrolment in higher education (i.e., college or university) (Ghara, 2016; Karak & Sen, 2017, November; Stoet & Geary, 2020). Apparently, in general, the male group is still in a better position in terms of acceptance by society (Mullick, 2010). Hence the present result i.e., first-year males are significantly higher in resilience than females can be justified in the Indian or Eastern Indian cultural context. Here we suggest the possibility that it has to do with Western countries being among the most gender-equal societies in the world (World Economic Forum, 2020). Namely, all the arguments rely on assumptions of boys and girls not being treated equally for parents' financial investments, parents' time, and parents', teachers', and peers' expectations. The validity of these assumptions may be weaker in more gender-equal societies and stronger in less gender-equal societies (Eriksson & Lindvall, 2023).

### *Effects of SES on resilience*

Present research further reported that the level of resilience varies substantially for their SES level (low, moderate & high). Further, it was revealed that students with moderate SES groups were less resilient than students with high SES backgrounds. The existing literature postulates that socioeconomic status, i.e., parental education, employment, and income play a major role in adjustment, overcoming adversity, or bouncing back after any difficult situation that

is termed as resilience (e.g., Kumar, 2012; Mary & Patra, 2015). Machuca (2010) reported that household incomes and employment status were correlated with resilience. Wells (2010) showed lower household income significantly correlated with resilience in general. Further, people with higher monthly family income have a higher level of resilience (Schwartz et al., 2019). In contrast, Mokoena (2010) showed no significant effect of socioeconomic status on the resilience of first-year psychology students in South Africa. Himmel (2015) also reported no significant effect of parental education and financial status on resilience of the college students. Although, the present research outcomes having first-year undergraduate students revealed a significant effect of SES on resilience and high SES groups were significantly higher than moderate SES groups in resilience scores. The students from the family with high socio-economic status manage to get more physical care, nursing, improved healthcare, schooling, food, and other services or resources to overcome the difficulties of life effectively (Li & Qiu, 2018; Wang & Geng, 2019). Resilient individuals, in general, are physically fit which is related to good and healthy food consumption. Economically balanced and aware families can offer sufficient food for their children. Furthermore, overall higher SES is related to better social support (Blevins, 2009; Moor et al., 2010) which is one of the protective factors of resilience. Social support in terms of peer and family assistance serves as a protective factor at the time of the conflict or normal development under risky situations.

Researchers reported that students, living in high SES families are optimistic (Robb et al., 2009) and an optimistic individual possesses a positive attitude amidst adverse situations and therefore considers optimism as one of the important aspects of resilience (Yu & Zhang, 2007). It was the most influential cognitive factor for adolescents in mitigating the effects of life stressors (Tusaie-Mumford, 2001). Also, high SES help in developing self-esteem among students (Rhodes et al., 2004; Twenge & Campbell, 2002) which was positively correlated (Kapikiran & Acun-Kapikiran, 2016) and predicted resilience (Karatas & Cakar, 2011). Hence students belonging to high SES are most likely to be optimists which results in resilience.

One interesting result was that high SES groups were not different significantly from low SES groups and both groups were higher than the moderate SES group in terms of mean resilience. Students belonging to Low SES might have seen their challenges and crises in a meaningful manner with a sense of coherence and attempted to overcome those obstacles to move forward in life and hence build a resilient character that is why high and low SES found ap-

proximately similar resilience scores. As per Barbarin (1990), poverty provides opportunities to increase their managing skills and build on their self-efficacy. Adversity in terms of SES may be a challenge or opportunity for development instead of an obstacle (Kumar, 2012). On the other hand, Fovet (2011) reported low SES contributes to developing resilience (as cited in Kumar, 2012). Children growing up in stressful circumstances are more likely to become resilient and hopeful under certain situations (as cited in Kumar, 2012), thus these two extreme groups have not shown any substantial differences in resilience. Lower socio-economic status sometimes works in the opposite direction which means students born in a poor and or impoverished family do not want to experience the same in the future instead seek to alter and improve the situation. They go through hardship and form a tenacious attitude towards success in life. Accordingly, they lead their life, embrace the situation in the way of their hardship journey learn the adapting skills, and overcome the stressful situation. As a consequence, they uplift their capability of stress tolerance (Fovet, 2011; Kim et al., 2018; Kumar, 2012; Mokoena, 2010).

#### *Interactive effect of gender and SES on resilience*

In the study it was found that the study found no significant interactive effect of gender and SES on resilience, implying that the effect of gender does not vary with different SES (low, moderate, high), which was supported by Mokoena (2010) in the study with first-year psychological students in South-Africa. Almost all students experience some of the common problems in the academic transitional stage during the higher education process like change of location, loneliness, homesickness, and anxiety (Jeyagowri & Ilankumaran, 2018).

In a new environment, students meet with new people enthusiastically but there is a fluctuation between enthusiastic feelings and those of apprehension. Moreover, autonomy in management and self-direction in freedom are other challenges since the strictly disciplined school environment has recently been abandoned. They are struggling, trying to adapt and accept a new culture with their established values and identity, regardless of their demographic differences, that can explain the results of the present research. This interaction between gender and SES for the resilience of Indian first-year students must be explored empirically further.

#### *Limitations of the study*

The study has some limitations that need future consideration. The Study sample was first-year

college students; hence outcomes may not be generalized to other academic levels. A large number of the participants ( $N = 246$ ) in the study were from the moderate SES group, which limit the generalizability of the findings to the broader Indian community. Sample variation from diverse developmental stages, educational backgrounds, and geographical locations must be included in a single study further. There always remains a lack of validity in self-report surveys. Future researchers need to consider measuring resilience on a practical basis and there is a need for a longitudinal study to track the resilience process related to their academic stages. Further study is needed to measure resilience with respect to education, occupation, and income of the family separately in the Indian cultural context.

### Implication

The research outcomes may suggest certain practical implications of the study. College transition is the phase of emerging adulthood when they can begin to discuss and understand gender roles. Adolescents have the ability to change their short and long-term gender perceptions by discussing gender equality and bringing gender inequality to the fore (Yu et al., 2017). Therefore, gender sensitization and empowerment programs should be initiated on the institution's campus. It is also important to make female students aware of government policies and facilities provided for female students and prompt them to avail themselves of those. Students are taught to question injustice, oppression, and violations of women's rights. Programs on Legal Literacy and Women's Rights to raise awareness of their rightful position and to and recognize their potential should be organized (Mittal & Kaur, 2019). Further Gender Champions Awareness Programs should be launched, like sharing stories of exceptional, extraordinary men, women, and transgender people who have impacted the lives of women and girls, as well as information about legislation, government programs, and so on (Baruah, 2019). Gender Awareness Programmes should be included in the Academic Calendar. Further, from the governmental policy perspective, social and economic planning committees must show concern and ensure the minimum quality of life and economic sufficiency of their citizens. If possible, they need to be given job facilities, financial assistance, and related resources. The institutions may employ *First-Year Experience (FYE) Programs* (Hunter, 2006, as cited in Leary & DeRosier, 2012), which would be helpful for students to build effective relationships with peers and cope with stressors. Academic skills, wellness, and stress management are among the topics covered in the FYE. The themes included: general programs

addressing the similarity of the student's classes and extracurricular activities; initiatives tied to a particular discipline; integration of multi-strategies in learning centers; learning communities; reappraisal of classroom structure, student-faculty ratio, and additional outside-of-classroom support for first-year students; as well as an enhanced role for the university's student affairs department (Cutright, 2002).

### Conclusion

Despite these limitations, the study has considerable significance. In contrast to Mokoena (2010) and Herrero (2014), the present findings established the significant role of gender in the resilience of students, particularly in the transition phase. The nature of resilience among students in transition to higher education is another important aspect that the study explored which will be helpful for further intervention. Low socio-economic status was not supported as a risk factor for resilience, particularly for first-year students. Moreover, it can be suggested that paying more attention to male students and sensitizing them about the prejudices and norms faced by females in their communities may be beneficial as they can become facilitators rather than obstacles in the lives of females (Landry et al., 2020).

### Ethics statement

The study was approved by the Research Advisory Committee (RAC) of the University of Calcutta. Informed consent was obtained from all participants, and they were provided with detailed information regarding the study. Confidentiality was ensured throughout the research process. Only participants who voluntarily agreed to participate were included in the study.

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### Conflict of interest

The authors declare no conflict of interest.

### Author contribution

Dr. Sahanowas Sk (S.S.) and Prof. Santoshi Halder (S.H.) made equal contributions to all stages of the manuscript, including conceptualization, drafting, writing, and finalizing. S.S. conceptualized the

study, reviewed the relevant literature, collected the data, performed the statistical analysis, and drafted the initial manuscript. S.H. contributed to the conceptualization of the article, critically revised the manuscript, and provided continuous support throughout the process, from developing the initial ideas to finalizing the manuscript. Both S.S. and S.H. have reviewed and approved the final version of the manuscript for submission.

## Data availability

The confidential data underlying the results of this study can be made available upon request, subject to reasonable conditions, by contacting the corresponding author.

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