

Relationship between Impostor Syndrome and Self-Esteem among Indian Students and Working Professionals: A Cross Sectional Study

Niyati Sakharkar, Suparna Deepak*

Department of Biotechnology, Pillai College of Arts, Commerce and Science (Empowered Autonomous), New Panvel, Navi Mumbai, India

niyati24bio@student.mes.ac.in, suparnadeepak@mes.ac.in

* Corresponding Author

Abstract

Impostor syndrome (IS) is a psychological pattern when a person doubts their own abilities and fears being exposed as a fraud, even when there is clear proof of their competence. Self-esteem (SE) is how a person judges their own overall worth. Earlier research has found that stronger impostor feelings goes hand in hand with lower self-esteem. This study examined that link among Indian school students, undergraduates, postgraduates and working professionals. An online survey in English, Marathi and Hindi collected 193 responses, of which 184 remained after screening. IS (10 item CIPS scale, range 10 to 50) and SE (Rosenberg Self-Esteem Scale, range 10 to 40) were both reliable and alpha values were 0.91 and 0.86, respectively. IS and SE has a positive correlation of 0.64, with a p value below 0.001; opposite to most published findings. Scores differed significantly across four groups, with working professionals lowest, women higher than men, and scores falling with age and work experience. Respondent group, but not gender, was significantly associated with high or low IS. Impostor feelings are common here and move with self-esteem rather than against it, pointing to useful directions for student counselling and workplace mental-health support.

Keywords: *Impostor Syndrome, Impostor Phenomenon, Self-Esteem, Rosenberg scale, students, working professionals, India.*

I. INTRODUCTION

In the Indian academic scenario, where intense competition and high performance expectations begin early, the impostor phenomenon is strikingly common. Recent studies show that nearly half (48.5%) of medical students experience frequent to intense impostor feelings, while as many as report at least some degree of intellectual phoniness despite clear evidence of competence^[1]. Similar patterns have been observed among other student groups, with prevalence of clinically significant impostor experiences often exceeding 45–56%. But since many of the studies are conducted for medicals students this survey tried to bring a broader perspective in Indian cohort.

Impostor syndrome, also called the impostor phenomenon, is a pattern where a person cannot accept their own success as real;

even when there's clear evidence they're doing well by getting good grades, a promotion, positive feedback the person still feels they just got lucky, or that others will soon "find out" they're not really capable. Clance and Imes first coined the term in 1978 while working with high-achieving women in therapy^[2]. Later studies showed the feeling shows up across genders, ages, education levels and jobs, and not limited to a certain category.

Self-esteem is simply how someone feels about their own overall worth. People with higher self-esteem usually handle stress better and have stronger mental health, while low self-esteem is tied to depression, anxiety and lower motivation. The Rosenberg Self-Esteem Scale (RSES), developed in 1965, remains the most widely used measure of this and has been tested and validated in many countries, including India^[3].

A large amount of research has looked at how impostor syndrome and self-esteem relate to each other. Most studies find a moderate-to-strong negative relationship: people who feel more like impostors usually report lower self-esteem [6], [7], [8]. Some researchers point out that it may not just be the level of self-esteem that matters, but also how stable it is: a person can have high self-esteem that depends on constant approval from others, and still feel like a fraud within themselves [6]. Even with all this research, a few gaps remain. Most studies come from Western countries or look at only one group at a time, such as medical students or managers. Very few studies collect data from school students, undergraduates, postgraduates and working professionals together, in the same cultural setting. Data from multilingual Indian populations is also limited, even though India has one of the largest and fastest-growing student and working populations in the world. This study tries to fill these gaps by surveying a mixed Indian sample in three languages.

II. LITERATURE SURVEY

Clance and Imes (1978) were the first to describe the impostor phenomenon: as an internal sense of being an intellectual fraud that persists even when someone is objectively successful [2]. Clance (1985) later filled in the picture with a fuller symptom profile: perfectionism, fear of failure, alternating over-work and procrastination, and a tendency to wave off compliments [4]. Langford and Clance (1993), reviewing the work that followed, pointed to upbringing, early messages about ability, and certain personality traits as likely contributors [5]. The Clance Impostor Phenomenon Scale (CIPS) went on and became the most widely used measurement tool, though several other scales have since been developed and used alongside it [9], [14]. This study makes use of the same scale, but its mini version with 10 questions.

Rosenberg's (1965) self-esteem scale has held up remarkably well across age groups and cultures since decades. [3]. Factor-analytic studies generally agree it captures a single underlying trait, and reported reliability is usually above 0.80. In the present survey, the scale used a 1–4 rating format, and the five negatively worded items were reverse-scored so that a higher total (range 10–40) reflects higher self-esteem.

Most research linking the two constructs has found negative correlations. Schubert and Bowker (2019) reported $r = -0.62$ between CIPS and Rosenberg scores among undergraduates, and found that the instability of a person's self-esteem strengthened the relationship further [6]. Egwurugwu and colleagues (2018) found much the same ($r = -0.65$) among Nigerian medical students [7]. Bravata and co-authors (2020), reviewing 62 studies, concluded that impostor syndrome shows up across many populations and is tied to lower self-esteem, along with higher anxiety and depression [8]. Studies of teachers, early-career workers and graduate students report the same moderate-to-strong negative pattern [9], [11], [12], [13].

Gender differences appear often in this literature. Women tend to score higher than men on impostor measures, though the gap varies in size and some studies find none at all [2], [22]. Patterns across age or career stage are messier: some studies show impostor feelings spiking at transitions like starting college or a new job, while others find the feeling stays fairly constant through adulthood [21], [26]. Culture may matter too; environments that place heavy weight on grades, comparison and constant evaluation seem to intensify impostor feelings [25], [28].

The impostor construct's measurement has itself drawn scrutiny. Holmes and colleagues (1993) compared two of the earliest impostor scales and found they captured overlapping but not identical ideas [15]. Chrisman and colleagues (1995) and Chae and colleagues (1995) each tested the psychometric properties of the Clance Impostor Phenomenon Scale in American and Korean samples respectively and both confirmed it as a reliable, single-factor measure that travels reasonably well across cultures [18], [19]. Bernard, Dollinger and Ramaniah (2002) tied impostor feelings to personality, finding that people high in neuroticism and low in conscientiousness reported more of them [20]. Clance and O'Toole (1987) argued that impostor feelings function as an “internal barrier” that keeps otherwise capable women from pursuing opportunities they are objectively qualified for [24].

Other studies connect impostor feelings to outcomes beyond self-esteem. McGregor, Gee and Posey (2008) found impostor

feelings associated with higher depression scores among college students [16]. Kumar and Jagacinski (2006) linked them to goal and achievement oriented people more focused on avoiding failure than mastering a skill has reported stronger impostor feelings [17]. Cokley and colleagues (2015) found that gender-related stigma consciousness combined with impostor feelings predicted poorer academic self-concept in both female and male college students [23]. Thompson [21], Davis and Davidson (1998) showed that highly impostor-prone people tend to explain failure in intensely personal terms while discounting success as luck, an attribution pattern that likely keeps the cycle running [27]. Ghorbanshirodi (2012) reported that both self-esteem and emotional intelligence were negatively related to impostor feelings among medical students, pointing to emotional-skills training as a possible intervention [29]. Cozzarelli and Major (1990), in one of the earlier validity studies, tied impostor feelings to fear of failure and an unstable sense of competence rather than to actual ability [30]. More recently, Leonhardt, Bechtoldt and Rohrmann (2017) argued that “impostors” aren’t a single uniform group, identifying subtypes that combine differing levels of anxiety and perfectionism with self-doubt [31].

Impostor feelings and self-esteem also sit within the wider context of youth and workplace mental health. The World Health Organization’s 2022 World Mental Health Report notes that mental health conditions, including anxiety linked to chronic self-doubt and performance pressure, are rising among students and young workers worldwide, and calls for more locally grounded research of exactly the kind attempted here [32]. Sonnak and Towell (2001), studying British university students, found that low self-esteem, along with certain parenting styles, was one of the strongest predictors of impostor feelings [33]. Ross, Stewart, Mugge and Fultz (2001) connected impostor feelings to the “Big Five” personality model and to how much a person is driven to achieve, adding further support to the idea that impostor feelings are tied to a broader personality and motivational profile rather than being a stand-alone quirk [34].

Within India, a small number of studies have looked at impostor feelings among university students and working

professionals. The overall pattern usually matches what is found internationally, but sample sizes tend to be small and often come from a single college or field. This study adds a larger, more mixed Indian sample and uses both parametric and non-parametric tests so the results hold up even if the data is not perfectly normal.

III. METHODOLOGY

A. Research Design

This study used a cross-sectional, correlational survey design. Data were collected through online questionnaire, built using Google Forms and offered in three languages (English, Marathi and Hindi) so that respondents could answer in the language they were most comfortable with.

B. Participants

A total of 193 people opened and attempted the survey. After removing responses that did not give informed consent or explicitly declined to participate, and removing responses with missing answers on any of the 20 scale items, 184 complete and valid responses remained for analysis (English, $n = 176$; Marathi, $n = 8$). Responses were collected through convenience and snowball sampling, using social media and messaging groups, so results should be generalised with some caution. The sample included 29 school students (10th/12th standard), 53 undergraduate students, 53 postgraduate students and 46 working professionals; 3 respondents did not fit cleanly into one of these four groups (for example, unemployed respondents not currently studying) and were excluded from the group comparisons only, while still being included in the overall descriptive and correlation analyses. Gender distribution was 103 female (56.0%), 77 male (41.8%) and 4 (2.2%) who preferred not to say. Age ranged from 14 to 60 years and was grouped into five bands: 14–17 years ($n = 20$), 18–25 years ($n = 100$), 26–35 years ($n = 33$), 36–45 years ($n = 14$) and 46–60 years ($n = 17$).

C. Instruments

Impostor Syndrome was measured using a 10-item CIPS scale [35], with each item rated on a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree) rather than the original

7-point frequency scale used in the CIPS-10 validation study. All ten items were worded in the direction of higher impostor feelings, so item scores were simply summed, giving a possible total range of 10 to 50; higher scores mean stronger impostor feelings.

Self-Esteem was measured using the Rosenberg Self-Esteem Scale (RSES) [3], a widely used 10-item scale. In this survey, it was rated on a 4-point scale (1 = strongly disagree to 4 = strongly agree). Five items are worded positively and five negatively; the five negative items (items 2, 5, 6, 8 and 9) were reverse-scored (recoded value = 5 – original value) before summing all ten items, giving a possible total range of 10 to 40, with higher scores meaning higher self-esteem.

The questionnaire also collected demographic details: preferred language, current status (school student, undergraduate, postgraduate, or working professional), gender, age group, highest education level, and years of work experience.

D. Ethical Considerations

The survey began with an informed-consent screen explaining the purpose of the study that participation was voluntary and anonymous, and that responses would be used only for academic research. Only respondents who actively selected "Yes, I agree to participate" were included in the analysis; anyone who selected "No" or left the consent question blank was excluded before any further processing. No personally identifying information such as name, phone number or email address was collected. Respondents were free to stop the survey at any point without submitting their responses.

E. Hypotheses

The following are the hypothesis that this study took under consideration:

- H1: There is a significant negative correlation between impostor syndrome and self-esteem scores among Indian students and working professionals.
- H2: There is a significant difference in impostor syndrome levels across the four respondent groups

(school students, undergraduates, postgraduates, working professionals).

- H3: There is a significant difference in self-esteem levels across the four respondent groups.
- H4: Age, education level and work experience are significantly correlated with impostor syndrome and self-esteem scores.
- H5: Demographic factors (gender, respondent group) are significantly associated with impostor syndrome and self-esteem levels.

For every hypothesis test below, the null hypothesis (H0) stated that there is no significant relationship or difference, and results were considered statistically significant at $\alpha = 0.05$.

F. Statistical Analysis

Data were cleaned and analysed using Excel. Internal consistency of both scales was checked with Cronbach's alpha. Normality was checked with the Shapiro-Wilk test. Because both scales showed mild deviation from normality, results are reported using both parametric tests (Pearson correlation, independent-samples t-test, one-way ANOVA) and their non-parametric equivalents (Spearman correlation, Mann-Whitney U test, Kruskal-Wallis H test), so that conclusions do not rest on the normality assumption alone. Where Levene's test showed unequal variances, Welch's ANOVA and Welch's t-test (which do not assume equal variances) were used alongside the standard versions. Significant ANOVA results were followed up with Tukey's HSD post-hoc test to find out which specific group pairs differed. Chi-square tests of independence were used to test associations between categorical demographic variables and impostor syndrome/self-esteem levels, using a median-split (high vs. low) of each scale. Trend graphs were plotted to visualise how mean scores changed across ordered demographic categories (age group and years of work experience).

IV. RESULTS

A. Sample Demographics

Table I summarises the demographic composition of the final analytic sample (N = 184).

TABLE I. DEMOGRAPHIC PROFILE OF RESPONDENTS (N = 184)

Variable	Category	n	%
Age (years)	14–17	20	10.9
	18–25	100	54.3
	26–35	33	17.9
	36–45	14	7.6
	46–60	17	9.2
Gender	Female	103	56.0
	Male	77	41.8
	Prefer not to say	4	2.2
Occupation / Status	School Student	29	15.8
	Undergraduate	53	28.8
	Postgraduate	53	28.8
	Working Professional	46	25.0
	Other/unclassified	3	1.6

B. Reliability and Descriptive Statistics

Both scales showed a good internal consistency: Cronbach's α reached 0.91 for the 10-item (CIPS) Impostor Syndrome scale and 0.86 for the (RSES) Rosenberg Self-Esteem Scale, comfortably above the usual 0.70 cut-off. The mean Impostor Syndrome score was 30.14 (SD = 9.58, SE = 0.71, range 10–50) out of a possible 50, and the mean Self-Esteem score was

22.40 (SD = 6.34, SE = 0.47, range 10–40) out of a possible 40. Both distributions deviated mildly from normality (Shapiro-Wilk: IS, $W = 0.983$, $p = .026$; SE, $W = 0.978$, $p = .006$), which is why non-parametric tests accompanied the parametric ones throughout. Figure 1 shows the distribution of both scores.

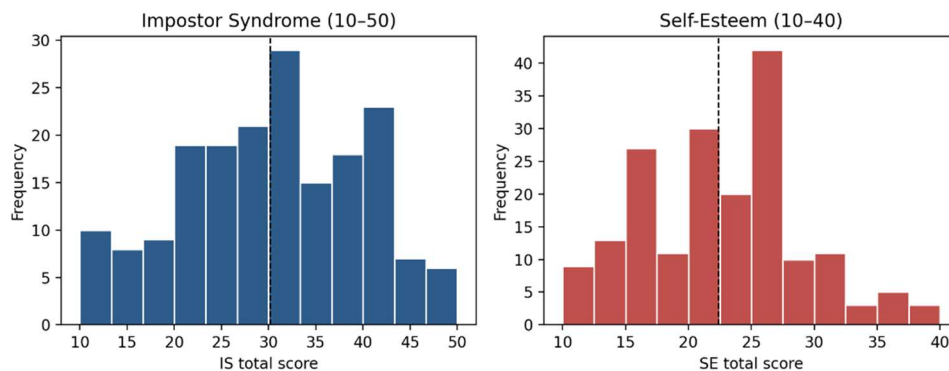


Fig. 1. Distribution of Impostor Syndrome (left) and Self-Esteem (right) total scores (N = 184).

C. Relationship between Impostor Syndrome and Self-Esteem (H1)

Contrary to the expected negative relationship, like earlier studies; Impostor Syndrome and Self-Esteem turned out to be significantly and positively correlated by Pearson's r ($r = 0.64$, $p < .001$) and Spearman's ρ ($\rho = 0.65$, $p < .001$) alike. In practical terms, respondents who scored higher on the impostor scale also tended to report higher self-esteem, not lower, which is opposite to what most Western samples show. We reject the null hypothesis of no relationship, since a significant relationship clearly exists but the direction is the opposite of what earlier research would predict, a point taken up in the Discussion. Figure 2 plots this relationship as a scatter plot with a fitted trend line.

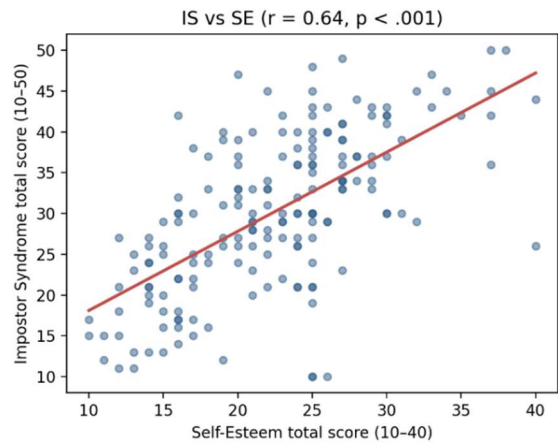


Fig. 2. Scatter plot of Self-Esteem against Impostor Syndrome scores, with a linear trend line ($r = 0.64$, $p < .001$).

D. Differences across Respondent Groups (H2, H3)

Table II gives the mean, standard deviation and standard error of both scores for each of the four respondent groups.

TABLE II. IMPOSTOR SYNDROME AND SELF-ESTEEM BY RESPONDENT GROUP

Group	n	IS Mean (SD)	SE Mean (SD)
School Student	29	33.07 (7.88)	23.55 (6.64)
Undergraduate	53	29.92 (9.24)	23.40 (5.42)
Postgraduate	53	32.49 (10.43)	23.64 (6.84)
Working Professional	46	25.70 (8.60)	19.17 (5.57)

A one-way ANOVA found a significant difference in Impostor Syndrome scores across the four groups, $F(3, 177) = 5.65$, $p = .001$, and the Kruskal-Wallis test agreed ($H = 16.86$, $p < .001$) to it. Levene's test showed the group variances weren't significantly different ($p = .357$), so the standard ANOVA holds up here; Welch's ANOVA confirmed the result ($F = 6.23$, $p < .001$). Tukey's post-hoc test showed working professionals scoring significantly lower in both the scales; than both postgraduates ($p = .002$) and school students ($p = .005$), with no other pairwise differences reaching significance. Self-Esteem also differed significantly across groups, $F(3, 177) = 5.84$, $p = .001$ (Kruskal-Wallis $H = 16.39$, $p < .001$; Levene's $p = .176$; Welch's $F = 6.48$, $p < .001$), and post-hoc comparisons showed working professionals scoring significantly lower than postgraduates ($p = .002$), undergraduates ($p = .004$) and school students ($p = .015$). Both H2 and H3 are therefore supported the

hypothesis and rejected the null hypothesis; respondent group is significantly related to both impostor feelings and self-esteem, and working professionals consistently land lowest on each. Figures 3 and 4 show the group means with standard-error bars, and Figure 5 presents the same data as box plots to show the spread within each group.

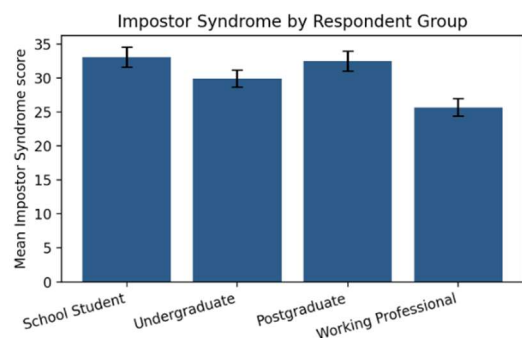


Fig. 3. Mean Impostor Syndrome score by respondent group (error bars = SE).

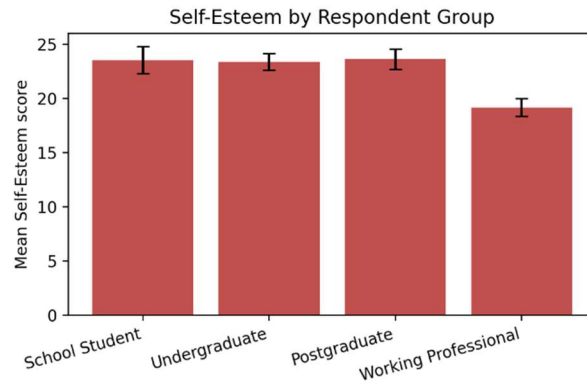


Fig. 4. Mean Self-Esteem score by respondent group (error bars = SE).

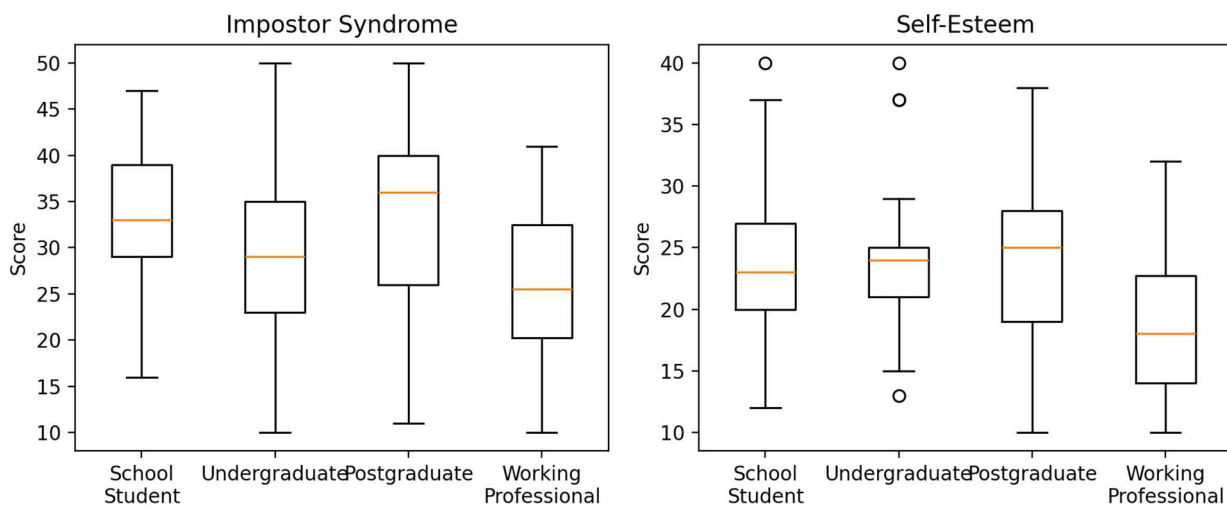


Fig. 5. Box plots of Impostor Syndrome and Self-Esteem scores by respondent group, showing median, quartiles and spread.

E. Gender Differences

Female respondents ($n = 103$) reported higher Impostor Syndrome scores ($M = 32.05$, $SD = 9.57$) than male respondents ($n = 77$; $M = 27.81$, $SD = 9.07$), Welch's $t(169.5) = 3.03$, $p = .003$; Mann-Whitney $U = 4955.5$, $p = .004$. Females also reported significantly higher Self-Esteem scores ($M = 23.72$, $SD = 6.21$) than males ($M = 20.69$, $SD = 6.24$), Welch's $t(163.9) = 3.23$, $p = .0015$; Mann-Whitney $U = 4963.0$, $p = .004$. This pattern; females scoring higher on both measures is consistent with the overall positive IS-SE relationship reported above. Respondents who preferred not to disclose gender ($n = 4$) were excluded from this specific comparison due to the very small sub-sample size. Figure 6 compares the two groups directly. So

H5 is supported as in this study and similar results were mentioned in the previous studies too.

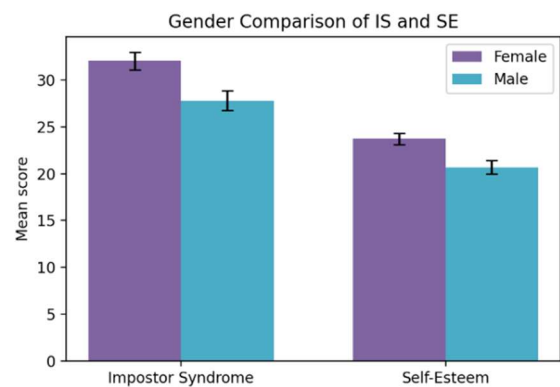


Fig. 6. Mean Impostor Syndrome and Self-Esteem scores by gender (error bars = SE).

F. Age and Work-Experience Trends (H4)

A one-way ANOVA across the five age bands was significant for Impostor Syndrome, $F(4, 179) = 2.88, p = .024$ (Kruskal-Wallis $H = 11.91, p = .018$), and for Self-Esteem, $F(4, 179) = 3.15, p = .016$ (Kruskal-Wallis $H = 12.34, p = .015$). As shown in Figure 6, both scores were highest among the youngest respondents (14–17 years) and generally declined with age before levelling out in the oldest band, with the lowest points around the 36–45 age band; it could be also due to small sample size for that particular age group. Spearman correlations with age (treated as an ordered variable) were significant and negative for both Impostor Syndrome ($\rho = -0.24, p = .001$) and Self-Esteem ($\rho = -0.24, p = .001$), confirming the downward trend seen in the graph.

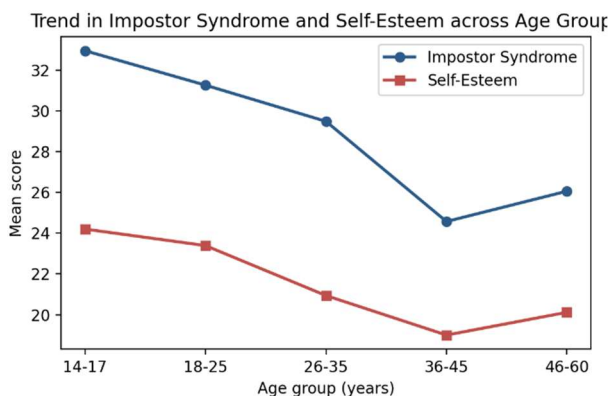


Fig. 7. Trend in mean Impostor Syndrome and Self-Esteem scores across age groups.

Fig. 8. A similar downward trend showed up across years of work experience (Figure 8). Spearman correlation between years of experience (ordered from 0 to 10+ years) and Impostor Syndrome was significant and negative ($\rho = -0.19, p = .009$), as was the correlation with Self-Esteem ($\rho = -0.24, p = .001$). This tracks the age finding and fits with working professionals who on average, carry the most experience, reporting the lowest scores on both measures in Table II. Education level (school, undergraduate, postgraduate/professional, doctorate, treated as ordered) showed no significant correlation with either Impostor Syndrome ($\rho = -0.02, p = .775$) or Self-Esteem ($\rho = -0.05, p = .532$), suggesting that in this sample, life stage and career progression matter more than the formal education level someone has reached. H4 is therefore partly supported: age and

work experience were significantly related to both scores; education level was not.

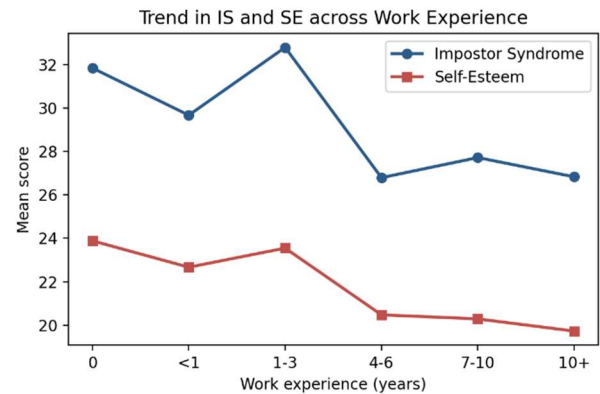


Fig. 8 Trend in mean Impostor Syndrome and Self-Esteem scores across years of work experience.

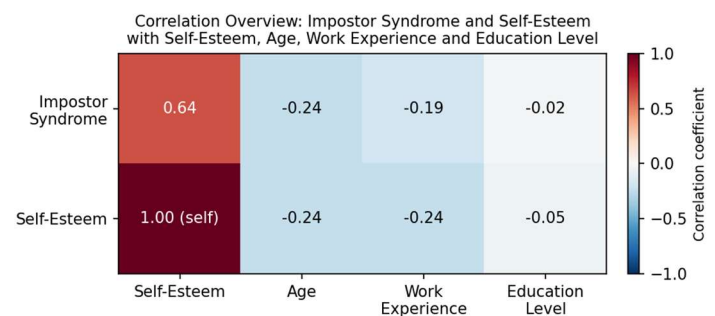


Fig. 9 Correlation overview: Impostor Syndrome and Self-Esteem with each other, age, work experience and education level (values as reported above).

Figure 9 pulls these correlations together in one place: the IS–SE relationship alongside the (weaker) links each scale has with age, work experience and education level, so the overall pattern of what moves with what is visible at a glance rather than scattered across several paragraphs.

G. Chi-Square Tests of Association (H5)

To test H5, each scale was split at its median into "High" and "Low" categories (median IS = 29; median SE = 22), and chi-square tests of independence were run against key demographic variables. Table III summarises the three tests performed.

TABLE III. CHI-SQUARE TESTS OF ASSOCIATION WITH HIGH/LOW SCALE LEVELS

Association tested	χ^2	df	p-value	Result
Gender $\times$ IS level	0.90	1	.344	Not significant
Respondent group $\times$ IS level	17.57	3	< .001	Significant
Education level $\times$ SE level	8.08	5	.152	Not significant

Respondent group was significantly associated with high/low impostor status, $\chi^2(3, N = 181) = 17.57, p < .001$: $n = 3$ unclassified responses; postgraduates and school students were more likely to fall in the "High" impostor category, while working professionals were more likely to fall in the "Low" category, matching the group-mean pattern already seen in Table II and Figure 3. Gender was not significantly associated with high/low impostor category once scores were split at the median, $\chi^2(1, N = 180) = 0.90, p = .344, n = 4$ "prefer not to say," even though the continuous-score t-test above did find a significant mean difference — this shows that gender shifts the

average level somewhat, without cleanly sorting people into the "high" versus "low" halves of the distribution. Education level was also not significantly associated with the high/low self-esteem category, $\chi^2(5, N = 184) = 8.08, p = .152$. Overall, H5 is partly supported: respondent group showed a clear categorical association with impostor level, while gender and education level did not reach significance at the categorical level.

H. Sample Composition

For transparency, Figure 10 shows the composition of the final analytic sample ($N = 184$) by respondent group and by gender.

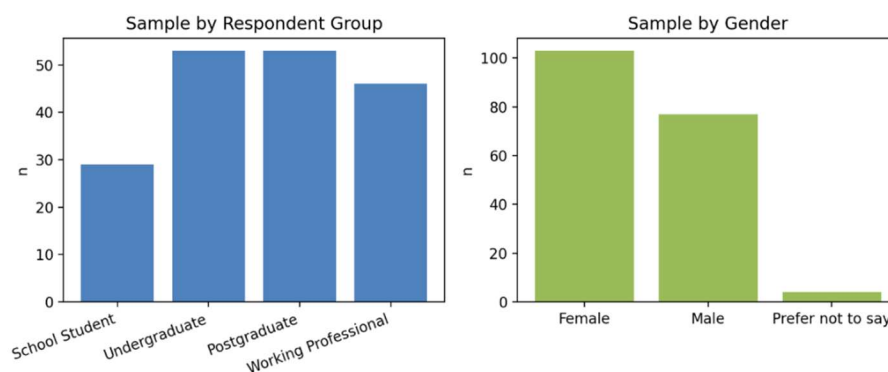


Fig. 10 Composition of the final sample by respondent group (left) and gender (right)

I. Summary of Hypothesis Testing

TABLE IV. SUMMARY OF HYPOTHESIS TEST OUTCOMES

Hypothesis	Test statistic	Decision
H1: IS–SE correlation	$r = 0.64, p < .001$	Not supported (positive direction)
H2: IS differs by group	$F(3,177) = 5.65, p = .001$	Supported
H3: SE differs by group	$F(3,177) = 5.84, p = .001$	Supported
H4: Age/education/experience correlate with IS & SE	see Fig 9	Partly supported
H5: Demographics associate with IS/SE level	see Table III and Fig 7	Partly supported

J. Item-Level Analysis

To understand which specific beliefs contributed most to the overall scores, Table V and VI gives the mean and standard

deviation of each of the 10 Impostor Syndrome items (1–5 scale) and the 10 Self-Esteem items respectively (1–4 scale, after reverse-scoring; higher raw scores on the reverse-worded items mean stronger agreement with the negative statement).

TABLE V. ITEM-LEVEL MEANS FOR THE IMPOSTOR SYNDROME SCALE (N = 184)

	Item (abbreviated)	Mean	SD
1	Fear of being found out	2.97	1.35
2	Doubt about repeating success	2.95	1.34
3	Fear of failing new tasks	3.14	1.30
4	Success attributed to luck (1)	2.51	1.28
5	Comparing ability to others	3.20	1.33
6	Success attributed to luck (2)	2.47	1.31
7	Remembers failures more than successes	3.43	1.27
8	Worry despite others' confidence	3.31	1.33
9	Discounts praise/recognition	2.95	1.23
10	Hard to accept compliments	3.23	1.29

TABLE VI. ITEM-LEVEL MEANS FOR THE SELF-ESTEEM SCALE (N = 184)

	Item (abbreviated)	Mean	SD	Worded
1	Satisfied with myself	2.15	0.93	Positive
2	No good at all	2.48	0.97	Negative
3	Have good qualities	2.02	0.83	Positive
4	Do things as well as others	2.10	0.91	Positive
5	Not much to be proud of	2.31	0.96	Negative
6	Feel useless at times	2.36	1.07	Negative
7	Person of worth	2.08	0.87	Positive
8	Wish for more self-respect	2.88	1.00	Negative
9	Feel like a failure	2.05	0.96	Negative
10	Positive attitude toward self	1.98	0.96	Positive

Two primary trends emerged at the item level, on the Impostor Syndrome scale, the highest-scoring items were "I tend to remember the incidents in which I have not done my best" ($M = 3.43$) and "I worry about not succeeding... even though others around me have considerable confidence in me" ($M = 3.31$), suggesting that selective memory for failure and a gap between others' confidence and one's own worry are the most commonly

endorsed impostor experiences in this sample. On the Self-Esteem scale, the reverse-worded item "I wish I could have more respect for myself" had the highest raw agreement ($M = 2.88$ on the un-reversed 1–4 scale), indicating this was the self-esteem-related concern respondents agreed with most, even though their overall reverse-scored self-esteem total was moderate.

V. DISCUSSION

This study set out to measure impostor syndrome and self-esteem among a mixed Indian sample of school students, undergraduates, postgraduates and working professionals, and to test how the two relate to each other and to demographic factors. Three findings stand out.

First, and most surprising, Impostor Syndrome and Self-Esteem were positively correlated ($r = 0.64$) rather than negatively, the opposite of most published findings and a reversal of H1's predicted direction. This breaks sharply from the literature: Schubert and Bowker (2019) found $r = -0.62$ [6], Egwurugwu and colleagues (2018) found $r = -0.65$ in Nigerian medical students [7], and Bravata and colleagues' (2020) review of 62 studies called the negative relationship one of the field's most consistent findings [8]. Three explanations seem plausible. First, a response-style effect: since both scales were self-report and answered back-to-back, acquiescence bias could have pulled scores in the same direction. Second, a cultural one: in collectivist, achievement-driven settings, admitting self-doubt while still describing oneself positively may not feel contradictory the way it does in the Western samples most research is based on, consistent with Chae and colleagues' (1995) finding that the Clance scale showed different item-level patterns in a Korean sample than in Western ones [19]. Third, the working-professional subgroup, lowest on both scales, may be driving the effect: since scores fall together across groups (Table II), much of the correlation could reflect between-group rather than within-person patterns, in line with Vergauwe and colleagues' (2015) view of impostor feelings as a stable trait varying across occupational groups [11]. Separating these would need a study designed to isolate within- from between-group correlation, which was beyond this survey's scope.

Second, respondent group mattered a great deal: working professionals reported the lowest Impostor Syndrome and Self-Esteem, while postgraduates and school students reported the highest, tracking the age and work-experience trends of H4, consistent with Lane's (2015) work on the student-to-professional transition [26] and Neureiter and Traut-Mattausch's (2016) finding that impostor feelings ease as people gain on-the-job competence evidence [14]. This could reflect a maturation or "settling in" effect, where harsh self-judgment and inflated self-praise fade together with a steadier routine, without necessarily meaning better wellbeing. Alternatively, professionals most affected by impostor anxiety may simply leave demanding jobs, leaving a self-selected, more settled group in the sample, consistent with Hutchins and Rainbolt's (2017) finding linking unmanaged impostor feelings among faculty to burnout and disengagement [12]. The elevated postgraduate scores echo Cokley and colleagues' (2013) finding that impostor feelings peak during periods of heightened academic evaluation such as graduate school [10].

Third, gender differences were significant and in the expected direction: women scored higher than men on Impostor Syndrome [2], [22], consistent with Gibson-Beverly and Schwartz's (2008) link to attachment style and validation needs [22] and Cokley and colleagues' (2015) finding that stigma consciousness compounds impostor feelings for women in competitive academic settings [23], plausibly relevant here given the high prevalence De and colleagues (2024) reported among Indian medical students [1]. Women also scored higher on Self-Esteem, again fitting the unexpected positive IS–SE link. Notably, gender did not cleanly separate "high" versus "low" impostor categories ($p = .344$) while respondent group did ($p < .001$), suggesting life stage or role matters more than gender for the most extreme cases, consistent with Leonhardt,

Bechtoldt and Rohrmann's (2017) view of impostor feelings as distinct subtypes shaped by context rather than any single demographic trait [31].

Education level, on its own, was not significantly related to either score, likely because it overlaps heavily with age and respondent group in this sample. This is broadly consistent with Kumar and Jagacinski's (2006) finding that goal and achievement orientation and attribution style, not formal education, drive impostor feelings [17], and Thompson, Davis and Davidson's (1998) finding that impostors' attributional pattern operates independently of academic progress [27].

A. Practical Implications

For educational institutions, the finding that postgraduate and school-level students report the highest impostor levels suggests counselling and student-support programmes should start impostor-syndrome awareness earlier, not just around exams. Promising low-cost interventions include normalising self-doubt through peer support, teaching students to challenge the habit of attributing success to luck, and training mentors to give specific, evidence-based feedback [24]; Ghorbanshirdi's (2012) finding states that emotional intelligence is inversely related to impostor feelings [29] suggests emotional-skills training could help too.

For workplaces, the lowest average scores among professionals shouldn't be read as "no problem here." People with strong impostor anxiety may simply leave demanding jobs or avoid promotions, which wouldn't show up in a cross-sectional survey of those still employed, consistent with Rohrmann, Bechtoldt and Leonhardt's (2016) finding that impostor feelings among managers link to avoiding leadership roles [13]. HR teams might examine

attrition and promotion-avoidance patterns rather than relying on average scores alone. Given women scored higher here, existing women-focused mentorship programmes could reasonably fold in impostor-syndrome content, in line with the World Health Organization's (2022) call for locally grounded, targeted mental-health interventions [32].

B. Limitations

- The sample used convenience sampling rather than random sampling, so it may not represent the wider Indian population and skews toward social-media-survey respondents.
- The design is cross-sectional and correlational: it shows association, not causation, and cannot rule out the response-style effects discussed above.
- The study used the 10-item short Clance Impostor Phenomenon Scale (CIPS-10), which used a 5-point agreement scale rather than a 7-point frequency scale in a validated short form of 10-CIPS; however, its shorter format may provide narrower content coverage than the original 20-item scale, and results may differ between the two versions [35].
- Group sizes were unequal, and the 36–45 and 46–60 age bands were small ($n = 14$, $n = 17$), so those estimates warrant caution.
- Since all measures were self-reported in one sitting, common-method and response-style biases can't be ruled out, a concern Cozzarelli and Major (1990) also raised in their methodological critique of self-report impostor research [30].

C. Directions for Future Research

Future studies could compare the CIPS-10 with the orig-

inal 20 items CIPS to test whether the positive correlation is scale-specific and is consistent across different versions of the instrument. A longitudinal design following people from student to early-career professional would help separate real change over time from the between-group differences found here, extending Lane's (2015) grounded-theory approach [26]. Qualitative interviews could also help explain why some Indian respondents hold both impostor feelings and high self-esteem together, building on Ross and colleagues' (2001) suggestion to interpret impostor feelings alongside broader personality and achievement-motivation profiles [34].

VI. CONCLUSION

This study measured impostor syndrome and self-esteem in 184 Indian respondents spanning school students to working professionals. Both scales were reliable, and impostor feelings were moderate on average ($M = 30.14$ out of 50). Against expectation, impostor syndrome and self-esteem were positively, not negatively, correlated, and this pattern held across most subgroups. Respondent group, gender, age and years of work experience were all significantly related to one or both scores, with working professionals and older, more experienced respondents reporting the lowest levels of both impostor feelings and self-esteem, and women reporting higher levels of both than men. These findings suggest that, at least in this Indian sample, impostor feelings and self-esteem do not always move in opposite directions as most Western research would predict, and that life stage and role may matter more than education level alone. Colleges could use these findings to design counselling support aimed particularly at postgraduate and school-going students, who reported the highest impostor levels, while workplaces might look further into why professionals report lower scores on both measures whether this reflects healthy adjustment, selective attrition of highly anxious employees, or something else before assuming it simply means better mental health.

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APPENDIX

Table VII lists the exact wording of the 10-item Impostor Syndrome scale used in this study [35]. The Rosenberg Self-Esteem Scale items used are the standard, published items and are not reproduced here in full; see Rosenberg (1965) [3] for the original wording.

TABLE VII. FULL WORDING OF THE IMPOSTOR SYNDROME 10- SCALE ITEMS

	Item
1	I'm afraid people important to me may find out that I'm not as capable as they think I am.
2	When I've succeeded and received recognition, I doubt I can keep repeating that success.
3	I'm afraid I may fail at a new task even though I generally do well at what I attempt.
4	I feel my success has been the result of luck instead of ability.
5	I compare my ability to those around me and think they may be more intelligent than I am.
6	I feel my success was due to some kind of luck rather than competence.
7	I tend to remember the times I have not done my best more than the times I have done my best.
8	I worry about not succeeding on a project or exam, even though others consider me capable.
9	When I receive praise for something I've accomplished, I tend to discount its importance.
10	It's hard for me to accept compliments or praise about my intelligence or accomplishments.