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The relationship of imposter phenomenon, self-esteem, and resilience: promoting well-being among registered nurses

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Abstract

Introduction Imposter phenomenon (IP) is common among health care professionals. Nursing is highly stressful and IP can manifest in several ways. Much research has been conducted on IP in various professions, but understanding the relationship between IP, self-esteem, and resilience is lacking among registered nurses. This study aimed to determine the relationships between IP, self-esteem, resilience, and well-being in registered nurses, and to investigate the potential mediating role of self-esteem within these pathways.

Methods This cross-sectional study involved the 292 registered nurses in Aseer, Saudi Arabia. Data were collected online between March and May 2024 using a self-report questionnaire. The study utilized the Clance Impostor Phenomenon Scale (CIPS), the Rosenberg Self-Esteem Scale (RSE), and Nicholson McBride Resilience Questionnaire (NMRQ) to measure the respective constructs. Descriptive statistics, correlation analysis, multiple regression, and path analysis were used to analysed the data.

Results Nurses have moderate IP (Mean = 49.75; SD = 18.02) alongside self-esteem (Mean = 27.53; SD = 2.71) and resilience (Mean = 42.85; SD = 8.38). Moreover, a non-significant correlation ($r = -0.002$, $p = 0.975$) between IP and self-esteem was observed. Conversely, IP does significantly positively correlate with resilience ($r = 0.578$, $p < 0.001$). For self-esteem prediction ($R^2 = 0.475$), resilience served as a strong positive predictor ($\beta = 0.680$, $p < 0.001$), while IP was not a significant predictor ($\beta = -0.001$, $p = 0.975$). Furthermore, mediation analysis verified strong direct impact of self-esteem on resilience ($\beta = 1.1391$, $p < 0.001$) as well as IP directly impacting resilience ($\beta = 0.2693$, $p < 0.001$). Notably, IP did not mediate the relationship between self-esteem and resilience, showing an indirect effect of ($\beta = -0.0033$, 95% CI: -0.1790 to 0.1928).

Conclusion Nurses tend to have self-esteem and resilience at a moderate level alongside the IP. Of interest, IP does not directly correlate with self-esteem—this is contrary to many claims. Also notable is that IP and resilience do tend to correlate positively. This indicates that coping mechanisms are likely to be formulated as a response to the feelings of an imposter, whereas self-esteem is predicted by resilience directly without mediation of IP. This strongly supports

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the need to design targeted interventions to enhance self-esteem and resilience among nurses in order to improve their wellbeing, productivity, and professional engagement.

Keywords Imposter phenomenon, Self-esteem, Resilience, Well-being, Nurses

Introduction

Nurses' well-being is the result of individual attributes and systemic factors intertwined alongside one another. Attributes such as self-esteem and resilience are essential for nurturing well-being; however, these personal factors do not operate in a vacuum. They are also shaped by larger factors such as organizational culture, leadership styles, socioeconomic conditions, and workload [1, 2]. Beneficial organizational attributes and supportive policies promote nurses' well-being and job satisfaction and reduce stress. Negative organizational environments can contribute to feelings of inadequacy, which increases stress and may lead to an Imposter Phenomenon (IP) [1, 3]. Therefore, to be effectively nurtured, self-esteem and resilience need a broader systemic approach. Supportive self-organizational factors such as a positive organizational culture, strong leadership, and adequate nurse-patient ratios foster environments in which nurses can thrive beyond mere survival. As such, such factors when addressed, it strengthens the sustainability of nurses' wellbeing and improves patient outcomes.

The IP appears to be a persistent self-doubt in one's abilities despite the presence of clear successes and achievements [4]. This type of phenomenon is common within the nursing profession because of its direct impacts, such as anxiety, depression, burnout, and overall widespread psychologic distress among nurses [5]. Recently there have been IP concerns with nursing students and practicing professionals which raises substantial concerns around the health, productivity, and general well-being of our nurses [6, 7]. Acknowledging IP in nursing is very important, but it is equally important to also cultivate other internal factors. Self-esteem which is a vital dimension of self-perception is significantly impacted by IP and influences an individual's well-being. It has been demonstrated that positive self-efficacy and self-awareness bolsters mental health and performance among nurses [8]. Therefore, enhancing self-esteem and resilience proves to be essential in optimally supporting nurses to maintain a healthy and productive nursing workforce. Resilience enhances self-regulation as well as the ability to cope and manage emotions, thus moderating feelings associated with imposterism in nursing [9]. The sophisticated concerns of IP, self-esteem, and resilience cannot be confined to individual wellness. Fostering environments that enhance self-esteem and resilience while minimizing self-doubt enables nurses to thrive in their positions. This, in turn, leads to increased job satisfaction, lower levels of burnout, and the capacity to deliver compassionate and high-quality care.

Psychological well-being is one aspect of a nurse's resilience, which greatly impacts their well-being. For instance, in nursing students, a well-developed psychological resilience along with lower stress levels predicts greater overall well-being. As such, it indicates the importance of tailored educational strategies to improve resilience and reduce psychosocial morbidity [10]. Self-reported resilience shows variation among nursing students with different levels of perceived well-being, and graduate students generally report higher resilience than undergraduates [11]. Previous study found that while most practicing mental health nurses demonstrate moderate psychological well-being, some face particular psychosocial patient-related stressors that impact them negatively. Younger and less experienced nurses tend to have lower rates of workplace resilience [12]. Moreover, fulfilling basic psychological needs at work has been shown to positively impact self-reported psychological growth and internalization, and overall well-being, although the influence of unmet needs and cultural considerations requires further exploration [13].

This study is based on Self-Determination Theory (SDT) [14, 15] which maintains that three essential psychological needs – autonomy, competence, and relatedness – must be fulfilled to achieve optimal psychological functioning and well-being. For nurses, SDT is useful in explaining the motivational factors associated with health behaviors and outcomes. Pertaining to resilience, SDT indicates that nurses who have greater autonomy tend to recover better from stressors due to feeling more effective and in control, enhancing their coping abilities. This is empirically supported by the fact that nurses with greater autonomy tend to have better work relationships and report higher self-esteem, resilience, self-efficacy, and well-being [16]. The need for competence—feeling effective and able—addresses the IP which is marked by feeling inadequate regardless of objective success. Nurses who feel competent are more likely to internalize their achievements which increases self-worth and diminishes feelings of being an imposter. Moreover, the need for relatedness – encompassing connection and support from colleagues – provides vital emotional resources to bolster resilience and counteract the self-doubt associated with IP. According to SDT, a workplace that cultivates nurses' autonomy, competence, and relatedness will increase their resilience and shield them from feelings of imposterism.

Our study explores these relationships using two interrelated analytical approaches, varying in their but complementary theoretical frameworks. First is to analyze how the IP and resilience directly impact self-esteem. This model adheres to the literature indicating that lower IP and higher resilience are correlated with stronger self-esteem, where self-esteem is viewed as a central outcome shaped by these personal attributes [17, 18]. This establishes baseline relationships that are often studied in psychological well-being research. The second is that this study proposes a mediation model in which self-esteem is an independent variable influencing the relationship between resilience and well-being, and mediating other relationships within a broader context. This model, particularly informed by SDT, suggests that fulfilling core psychological needs enhances self-esteem, which then elicits adaptive responses (including resilience) and overall well-being. This change in the function of self-esteem is essential to comprehend the mechanisms of nurses' well-being, shifting from simple correlation to causal exploration. Within SDT, higher autonomy and competence can bolster a nurse's self-esteem, which then equips them to draw on greater resilience during difficult situations, and yielding better well-being outcomes. This mediation model highlights the primary contribution and the key strength of our study which is the refined understanding of the intricate interdependencies involved.

While the relationships between IP, self-esteem, resilience, and self-reported well-being among registered nurses are undeniably complex and multifaceted, understanding these linkages is essential. This study adopts a holistic perspective to better understand nurses' self-care by simultaneously examining both micro-level (individual attributes) and macro-level (systemic influences) factors. The ultimate goal is to enable the formulation of specific policies and measures that will aid in fostering well-being, mental health, and job satisfaction among registered nurses. This study aimed to determine the relationships between IP, self-esteem, resilience, and well-being in registered nurses, and to investigate the potential mediating role of self-esteem within these pathways.

Methods

Design

This study utilized cross sectional approach.

Setting/Participants

Convenience sampling techniques were applied to select nurses practicing in a tertiary care hospital located in the Aseer Region of Saudi Arabia. Of the 1000 population of nurses, the target sample size was calculated at 278 participants plus 10% attrition rate resulting to 309 participants. The Raosoft online sample size calculator used, which determined a target sample size of at a 95% confidence level, 50% response distribution (in order to increase the sample size), and ± 5% margin of error. The sample size was calculated to adequately address the need for statistical power in our analyses.

Of the 309 invited participants, only 292 (94.5%) nurses provided complete and validated self-administered questionnaires. Due to the sparseness of data on the reasons for non-participation, most non-participants did not provide reasoning for their non-participation because of the high work demands of the participants.

Data collection

Before data collection began, an announcement was posted in a tertiary care hospital in the Aseer region through email, departmental meetings, and staff bulletin boards. The announcement focused on explaining the purpose of the study and the inclusion criteria, which were registered with the Saudi Commission for Health Specialties and had worked at the current hospital for at least one year. If nurses were interested, they were asked to join the research via the link provided in the invitation. Subsequently, the research team contacted these nurses and confirmed their eligibility by checking their registration with the Saudi Commission for Health Specialties and the length of employment at the hospital, potentially asking for proof of registration. Nurses who met these criteria were sent to participate in the survey. This technique was used to ensure that the nurses had maximum accessibility. Participants were given 15 min to complete the survey online. Data were gathered online between March and May 2024 using Google Questionnaires.

Questionnaires

The questionnaire assessed the nurses' Imposter Phenomenon (IP), self-esteem, and resilience, along with demographic and work-related characteristics (age, gender, marital status, area of practice, years of experience, educational background, workplace, nationality, working hours, and total years of nursing experience).

The Clance Impostor Phenomenon Scale (CIPS) is a 5-point Likert scale used to measure IP. Higher CIPS scores indicate more frequent and intense impostor-phenomenon experiences. Specifically, a total score of 40 or less suggests few impostor characteristics, 41–60 indicates moderate experiences, 61–80 indicates frequent feelings of imposter, and a score above 80 indicates intense impostor experiences [19].

The Rosenberg Self-Esteem Scale (RSE) was used, with items 1, 3, 4, 7, and 10 being reverse-scored [20]. Each statement was rated on a 4-point Likert scale, where 1 meant "Strongly Disagree" and 4, "Strongly Agree" (after recoding, this aligns with the typical scoring where higher values indicate higher agreement with positive

Table 1 Demographic characteristics among registered nurses. *N* = 292

Variables	Category	Frequency%	Percentage
Age in Years	< 30	105	36.0
	30–40	183	62.7
	> 40	4	1.4
Gender	Male	73	25.0
	Female	219	75.0
Educational Status	GNM	84	28.8
	B. Sc(N)	156	53.4
	M. Sc(N)	50	17.1
	Ph. D	1	0.3
Designation	Staff Nurse	185	63.4
	Nursing In charge	72	24.7
	Nursing Supervisor	35	12.0
Years of Experience	≤ 5 years	105	36.0
	> 5 Years	187	64.0
Marital Status	Married	120	41.1
	Unmarried	172	58.9
Area of Work	General / Medical Surgical Wards	55	18.8
	Other Areas	237	81.2

self-statements). The total self-esteem score ranged from 10 to 40. Based on established interpretive guidelines for the RSE, a score of 25–29 is considered moderate self-esteem, while scores above 30 indicate high self-esteem, and scores below 25 indicate low self-esteem. We focused on the mean RSE score for our sample in relation to these established norms rather than setting arbitrary thresholds.

The Nicholson McBride Resilience Questionnaire (NMRQ): The NMRQ is a 12-item measure of resilience created by McBride [21], measured on a five-point Likert scale. Scores range from 12 to 60. According to the NMRQ guidelines, scores of 0–37 indicate developing resilience, scores 38–43 indicate an established level of resilience, scores 44–48 indicate a strong level of resilience, and scores 49–60 indicate an exceptional level of resilience. Reliability was estimated using Cronbach's alpha = 0.76 [21].

The questionnaires were validated by three experts (a psychometrician from the research center, a nursing PhD from a university, and a hospital nursing educator). All experts agreed with the validity of the questionnaire. A reliability test was subsequently performed on 15 nurses, and Cronbach's alpha yielded scores of 0.85 for CIPS, 0.88 for RSE, and 0.86 for NMRQ.

Ethical consideration

This study was approved by the Ethics Review Committee of the King Khalid University (ECM #2024 – 1508) approved the research. Participation in the survey required consent, and the privacy of information and confidentiality were explained to the participants who met the inclusion criteria. A cover letter explaining the aim of the study, the voluntary nature of participation, and the participants' autonomy to withdraw at any time was provided to each survey participant.

Statistical analysis

Data were analyzed using SPSS version 26. Correlation, multiple regression, and path analyses were conducted to examine the relationship between IP, self-esteem, and resilience. The PROCESS macro was used for path analysis modelling. The significance level was set at $P < 0.05$.

Results

Table 1 shows that the majority of registered nurses in the sample were female (75%), aged 30–40 years (62.7%), unmarried (58.9%), and held a Bachelor of Science in Nursing (BScN) degree (52.4%). Most nurses had over five years of hospital experience (64%) and worked in medical and surgical wards (81.2%).

Table 2 presents the descriptive statistics for Imposter Phenomenon (IP), self-esteem, and resilience among the participating nurses.

The nurses scored an average of 49.75 (SD = 18.02) out of 100 on the CIPS test. Based on the CIPS interpretive guidelines, the participants experienced moderate IP. For self-esteem, the participants garnered 27.53 (SD = 2.71) out of 40 classified as moderate self-esteem. Lastly, for the resilience, as assessed by NMRQ, the average score was 42.85 (SD = 8.38) with a maximum of 60. Following interpretive guidelines published in [21], the average obtained falls within an established level of resilience, which is considered to be between 38 and 43.

Correlations among variables

The results in Table 3 indicate the correlations among IP, self-esteem, and resilience. A non-significant negative correlation was observed between IP and Self-Esteem ($r = -0.002$, $p = 0.975$), suggesting a negligible linear relationship between these two variables in our sample. In contrast, a significant positive correlation was found between IP and Resilience ($r = 0.578$, $p < 0.001$), indicating that individuals with higher IP levels tended to report

Table 2 Descriptive statistics for imposter phenomenon (IP), self-esteem, and resilience among the participating nurses

Variables	Obtainable scores	Minimum	Maximum	Mean	Mean%	SD
Imposter phenomenon	20–100	27	100	49.75	50	18.02
Self-Esteem	10–40	24	37	27.53	68.82	2.71
Resilience	12–60	18	55	42.85	71.42	8.38

Table 3 Correlations between IP, self-esteem and resilience among nurses

Imposter Phenomenon	*r*	1		
	p			
Self Esteem	r	-0.002	1	
	p	0.975		
Resilience	r	0.578**	0.367**	1
	p	0	0	

Table 4 Regression analysis of self-esteem among nurses

Predictor Variables	Unstandardized β	Standard Error (SE)	Standardized β	t	*p*-Value
Main Predictors					
Imposter Phenomenon (IP)	-0.001	0.04	-0.001	-0.03	0.975
Resilience	0.68	0.045	0.605**	15.11	< 0.001
Control Variables					
Age	0.01	0.02	0.02	0.5	0.617
Gender (e.g., Male vs. Female)	-0.15	0.07	-0.08*	-2.14	0.032
Educational Status (e.g., Bachelor's vs. Diploma)	0.08	0.05	0.05	1.6	0.11
Area of Work	0.03	0.04	0.04	0.75	0.454
Years of Experience	-0.05	0.02	-0.10*	-2.48	0.015
Model Summary					
R	0.689				
R^2	0.475				
Adjusted R^2	0.463				
F(7, 284)	36.85				0.000**

higher resilience levels. Furthermore, a significant positive correlation was observed between Self-Esteem and Resilience ($r = 0.367$, $p < 0.001$).

Regression analysis

The multiple regression analysis (Table 4) was conducted to predict nurses' self-esteem, with IP and resilience as primary predictors, while controlling for various demographic and professional factors including age, gender, educational status, area of work, and years of experience. The overall model was statistically significant, $F(7,284) = 36.85$, $p < 0.001$, indicating that the combination of these predictors significantly explained the variance in self-esteem. The model accounted for a substantial 47.5% ($R\ 2 = 0.475$) of the variance in self-esteem, with an adjusted R2 of 0.463.

The IP was found to be a non-significant predictor of self-esteem (β=–0.001, $p = 0.975$). This indicates that for every one-unit increase in IP score, self-esteem was not significantly predicted to change, even after accounting for the influence of other variables in the model. In contrast, resilience emerged as a highly significant and strong positive predictor of self-esteem (β = 0.680, $p < 0.001$). This implies that for every one-unit increase in a nurse's resilience score, their self-esteem score is predicted to increase by 0.680 units, assuming all other variables remain constant. Its standardized beta coefficient of 0.605 further highlights that resilience is the most influential predictor of self-esteem in this model.

Among the control variables, gender also showed a statistically significant negative association with self-esteem (β=–0.15, $p = 0.032$). While male was the reference category, this suggest that the other gender group (e.g., females) scored, on average, 0.15 points lower on the self-esteem scale compared to males, holding all other factors constant. Similarly, years of experience was a significant negative predictor of self-esteem (β=–0.05, $p = 0.015$). This means that for every additional year of nursing experience, a nurse's self-esteem score was predicted to decrease by 0.05 units, after controlling for other variables. Age (β = 0.01, $p = 0.617$), educational status (β = 0.08, $p = 0.110$), and area of work (β = 0.03, $p = 0.454$) were not significant predictors of self-esteem in this model.

Mediation analysis

Table 5 presents the direct and indirect effects from the mediation analysis, where self-esteem was examined in relation to resilience and IP.

Table 5 Direct and indirect effects from the mediation analysis

Effect Type	Effect	SE	t	*p*	LLCI	ULCI	β
Direct effect self-esteem on Resilience	1.1391	0.1327	8.5825	0.0000**	0.8779	1.4003	0.3677
self-esteem on IP	-	0.391	-0.0312	0.9751	-0.7817	0.7573	-0.0018
IP on Resilience	0.2693	0.0199	13.5079	0.0000**	0.23	0.3085	0.5788
Indirect effect(s) SE on Resilience (M- IP)	-0.0033	BootSE	N/A	N/A	BootLLCI	BootULCI	N/A
		0.0953			-0.179	0.1928	
Completely standardized indirect effect(s) of Self-esteem on Resilience (IPTot)	-0.0011	BootSE	N/A	N/A	BootLLCI	BootULCI	N/A
		0.0307			-0.0622	0.0578	
Total effect of Self-esteem on Resilience	1.1358	0.1692	6.7117	0.0000**	0.8027	1.4689	0.3667

Level of significance: ** $p < 0.01$

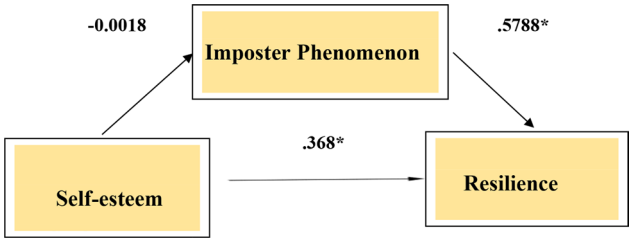

Fig. 1 Direct effect of the model

The results indicated that self-esteem had a significant direct positive effect on resilience (β = 1.1391, $p < 0.001$; standardized β = 0.3677), suggesting a strong direct association between these two variables. However, self-esteem did not have a significant direct effect on IP (β = -0.0312, $p = 0.9751$; standardized β = -0.0018), indicating no direct linear relationship between these variables in this model. IP had a significant direct positive effect on resilience (β = 0.2693, $p < 0.001$; standardized β = 0.5788).

The indirect effect of self-esteem on resilience through IP was not significant (Boot β = -0.0033, $p = 0.9578$; Completely standardized indirect effect = -0.0011, BootLLCI = -0.0622, BootULCI = 0.0578). This suggests that IP does not mediate the relationship between self-esteem and resilience. Overall, the significant total effect of self-esteem on resilience (β = 1.1358, $p < 0.001$; standardized β = 0.3667) was primarily driven by the direct effect of self-esteem on resilience, highlighting a substantial direct association.

Figure 1 illustrates the relationships among self-esteem, Imposter Phenomenon, and resilience. It shows that self-esteem had a significant direct positive effect on resilience, and IP also had a significant direct positive effect on resilience. In contrast, the figure indicates a non-significant, slightly negative relationship between self-esteem and IP.

Discussion

This study specifically aimed to determine the relationships between IP, self-esteem, resilience, and well-being in registered nurses, and to investigate the potential mediating role of self-esteem within these pathways. The findings of this study emphasize the intricate psychological profile of nurses, revealing a moderate prevalence of IP, which aligns with other student populations [22, 23]. This impersonation IP pattern poses a unique challenge to professional confidence and can lead to heightened stress and burnout. Moderately self-esteem also reported by these nurses is unusual as IP is associated with low self-esteem, indicating a more complex dynamic where professional self-doubt exists alongside overall self-affirmation. Moreover, nurses displayed a "moderate, yet established," level of resilience which indicates possessing an inherent ability to bounce back from adversity [23]. This is an important protective factor, especially against the considerable demands of nursing and the potential adverse impacts of IP. Taken together, these findings underscore the importance of addressing IP while also helping nurses reframe self-doubt and internalize their achievements. Strengthening existing resilience would protect well-being and professional functioning in the context of a demanding healthcare environment [22, 23].

Interrelationships between IP, self-esteem, and resilience

This current research has shown unique interconnections between nurses' IP, their self-esteem, and resilience. Specifically, the non-significant negative correlation between IP and self-esteem illustrates virtually no linear relationship between these two variables. This finding is important because it goes against the majority of pre-established assumptions which report a strong inverse relationship where lower self-esteem correlates with higher imposter feelings [8, 24]. However, current findings also support some studies that reported non-significant correlations in certain populations, suggesting this relationship is not universally applicable [25]. For example, in a study conducted on medical interns, while many experienced high levels of IP, its correlation with self-esteem was not significant, indicating other mediating or influencing factors might be responsible [25]. In our sample of nurses, it is likely that moderate self-esteem operates as a buffer which protects them from significant IP erosion, thus explaining the negligible correlation.

In contrast, there exists a significant positive correlation between IP and resilience. This finding seems paradoxical because it would be reasonable to assume inadequacy would correlate with lower resilience. This relationship, however, could indicate that the self-doubt and challenges posed by IP might drive individuals to fortify their coping strategies and adaptive mechanisms, thus fostering resilience [26]. This is consistent with the view that acute psychological distress, particularly when experienced within a supportive context, can promote coping resources and overall personal growth [26, 27]. Moreover, a significant positive correlation was observed between self-esteem and resilience which reinforces self-esteem's lower with better coping strategies and greater resilience necessary in challenging professions, such as nursing [8, 28, 29]. This relationship strengthens the hypothesis that self-esteem provides protective buffer, enhancing resilience and well-being [8].

Findings from the control variables indicated that gender and years of experience significantly predicted self-esteem among nurses, while age, educational status and area of work did not. Specifically, females scored lower on self-esteem compared to males, which corresponds with existing literature regarding gender differences in confidence [30]. Interestingly, self-esteem declined with

longer durations of nursing experience, a finding that contradicts some work demonstrating enhanced professional confidence with experience [31]. This suggests the presence of cumulative burnout or an increasing awareness of the difficulties within the profession. These findings highlight the need to address certain demographic and professional characteristics—especially gender and experience—when formulating strategies aimed at improving nurses' psychological well-being and warrant further investigation into the reasons behind these trends.

Predictors of self-esteem and mediation pathways

In this study, IP was not a significant predictor of self-esteem. This was expected from the correlational results. This result supports the notion that, in this particular nursing population, the feelings of an imposter do not substantially influence self-esteem [32]. In contrast, resilience emerged as a strong and significant predictor of self-esteem, explaining a remarkable 46.94% of the variance in self-esteem within this group of nurses. This illustrates the strong influence that resilience has on self-esteem, indicating that the capacity to adapt and recover from difficulties enhances a person's self-image and psychological well-being [28, 29]. This is consistent with other studies which show that resilience is an important mediating factor when considering psychological impact and self-esteem, enabling its maintenance at higher levels [30].

Meanwhile, the mediation analysis offered further understanding of the direct and indirect interactions between these variables. This present study found that self-esteem significantly and directly enhanced resilience. As such, this strong association highlights the instrumental role that self-esteem plays in the development of resilience in healthcare professionals [33]. Moreover, the results showed that self-esteem did not exert a significant direct influence on IP. This underscores, once again, that in our sample, self-esteem did not directly determine the severity of imposter feelings. Some earlier work suggested self-esteem correlates negatively with IP [34, 35] but our data indicate that other psychological factors, rather than self-esteem, may be more directly responsible for IP or that different factors may mediate this relationship.

Furthermore, the IP revealed a considerable direct positive impact on resilience once more supporting the paradoxical observation that the phenomenon of imposter feelings may coincide with or even aid in the development of resilience, potentially via coping strategy adaptations [27, 36]. Most notably, the indirect effect of self-esteem on resilience through IP was not significant. This suggests that, within our model, IP did not function as a mediator between self-esteem and resilience. This observation is particularly notable as it indicates that self-esteem directly impacts resilience without being significantly mediated by imposter feelings. So, while some prior research might propose more intricate relationships [37], our findings suggests that self-esteem directly influences resilience without relying on IP acting as a mediator.

Implications

The results of our study emphasize that self-esteem improvement among nursing staff should be a key element of organizational policies within healthcare structures. Since self-esteem is a strong predictor of resilience, resilience-building strategies are essential within training and development programs. Such programs may comprise resilience training workshops, mentorship initiatives, and benevolent peer groups that strengthen nurses' coping skills [38]. Although our study shows that IP does not directly impact self-esteem or mediate its effect on resilience, promoting an IP-inclusive supportive workplace culture can help mitigate its effects and empower nurses to thrive.

Understanding psychological elements related to self-esteem and resilience is critical, since high professional self-esteem is vital for the standard of patient care and professionalism [38]. Enhancing psychological health through self-esteem and resilience interventions improves job satisfaction and reduces burnout, which allows healthcare organizations to enhance the overall quality of patient care. These findings serve as a basis for further investigations while emphasizing the importance of strengthening the resilience and self-esteem of the nursing workforce with more focused strategies.

Limitations of the study

Despite deriving useful conclusions pertaining to the joint relationships of the imposter phenomenon, self-esteem, and resilience of registered nurses in the Aseer Region of Saudi Arabia, this study has some limitations. First, as with all cross-sectional studies, we cannot make causal inferences about the various relationships between the variables under study. Although our analysis may propel some predictive relationships, we cannot ascertain the causal order of these associations. Longitudinal studies are needed to determine the evolution of these relationships over time.

Second, convenience sampling from tertiary care hospitals within a particular region of Saudi Arabia may further limit the wider application of our results to other regions of the Kingdom or international healthcare systems. These shortcomings impact the external validity of the study, and may affect its acceptance in non-Saudi Arabian contexts. Moreover, as this study did not capture data on non-respondents, it is impossible to determine

whether these non-respondents systematically differed from those who completed the survey, leading to the assumption that non-response bias is plausible. Overall, studying non-response bias will aid in defining potential bias in the derived sample.

Third, reliance on self-reported measures carries the inherent risk of a social desirability bias. Either conscious or unconscious self-presentation as 'nurses' may have led to an overestimation of self-esteem and resilience while underreporting the imposter phenomenon becomes the narrative. Self-reporting questionnaires are widely accepted for data collection. However, further studies could incorporate multi-method approaches, such as observational data or interviews, to provide a richer explanation of these constructs.

Finally, further consideration of the Aseer Region of Saudi Arabia in terms of esteem and resilience within the nursing profession is related to sociocultural and contextual aspects. These specific frameworks may shape these psychological constructs. Focusing on these gaps in the literature could open new avenues for understanding multidisciplinary nursing disciplines, as explained in the context of our findings.

Conclusion

The study showed that nurses have moderate levels of Imposter Phenomenon (IP), self-esteem, and resilience. A significant finding was that IP self-esteem does not have a significant correlation which is often taken for granted. On the other hand, a counterintuitive positive correlation was found between IP and resilience which suggests coping strategies are developed as a response to feelings of being an imposter. Moreover, resilience was a significant predictor of self-esteem and there is a strong direct relationship between self-esteem and resilience such that IP does not mediate the relationship. These findings underscore the importance of developing specific programs aimed at self-esteem and resilience enhancement among nurses to improve their overall health and professional productivity.

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Author contributions
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Data availability
The datasets used and/or analyzed during the current study are available from the first author upon reasonable request.

Declarations

Ethics approval and consent to participate
The study was conducted following the Declaration of Helsinki. This study was approved by the Ethics Review Committee of the King Khalid University (ECM #2024 – 1508) approved the research. Informed consent was obtained from all the participants.

Consent for publication
Not applicable.

Competing interests
The authors declare no competing interests.

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