

Migration drivers, transition to practice, and workforce integration among Brazilian-educated nurses in the United States: A mixed-methods study

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Abstract

Background

International nurse migration is increasingly important to workforce planning, yet internationally educated nurses are often treated as a homogeneous group. Despite Brazil's large nursing workforce, evidence on Brazilian-educated nurses entering U.S. practice is limited. This study examined migration drivers, transition-to-practice experiences, workplace integration, and future career intentions among Brazilian-educated nurses in the United States.

Methods

A convergent mixed-methods design was used, with equal priority assigned to the quantitative component (a cross-sectional online survey) and the qualitative component (open-text survey responses and follow-up interviews). Thirty-six eligible nurses completed closed-ended and open-text survey questions; eight self-selected participants completed semi-structured interviews. Survey data were summarized descriptively, open-text responses and interviews were analyzed using inductive content analysis, and the findings were integrated through comparison and a joint display.

Results

Of the 36 participants, 32 (88.9%) were women; the mean age was 36.7 years. Quality of life (86.1%), professional recognition (66.7%), professional growth opportunities (66.7%), public safety (63.9%), and higher salaries (58.3%) were the leading migration drivers. Open-text and interview responses revealed that migration was embedded in broader family and life projects. Language/communication (50.0%) and bureaucracy/documentation/delays (47.2%) were prominent themes in the participants' accounts of migration and credentialing, whereas practice/system/technology differences (44.4%) and clinical communication (41.7%) characterized workplace integration. Interviews distinguished formal language proficiency from clinical communicative competence and described adaptation after licensure to technologies, documentation, routines, responsibilities, and organizational expectations. Structured orientation and preceptorship facilitated the nurses' adaptation, whereas insufficient preparation intensified their uncertainty. All but one participant (97.2%) intended to continue working as nurses in the United States, although their experiences and future plans varied.

Conclusions

For Brazilian-educated nurses in this study, entering U.S. nursing practice was an extended professional and life transition rather than an event completed at licensure. Licensure established their eligibility to practice but did not ensure their immediate practice readiness. These findings support the development of migration pathways that extend beyond recruitment to realistic pre-migration information, clinically relevant communication preparation, structured orientation, supportive preceptorship, and sustained workplace integration.

Background

International nurse migration is an increasingly important component of the global health workforce. The World Health Organization (WHO) has reported substantial inequalities in the distribution of nurses and continuing dependence on international mobility, particularly in high-income settings [1]. These patterns create a dual policy challenge: addressing workforce shortages in destination countries without exacerbating workforce inequities in countries of origin. The WHO Global Code of Practice on the International Recruitment of Health Personnel, amended in 2026, further emphasizes proportional benefits, co-investment, and responsible management of international recruitment [2].

The United States is a major destination for internationally educated nurses (IENs). As the United States continues to rely on IENs as part of its nursing workforce, understanding not only their entry into practice but also their longer-term professional integration has implications for workforce retention and organizational support. Recent reviews have identified communication and language, credentialing, cultural adjustment, differences in nursing practice, workload, psychological factors, work environment, peer support, and organizational support as important influences on IENs' transition to U.S. practice [3, 4]. Similar factors have been documented among IENs in other destination countries. For example, studies of Mexican nurses in Germany identified language acquisition, recognition of educational credentials, differences in professional roles, discrimination, and adaptation to a new sociocultural and workplace environment as important components of the migration and professional transition process [5–7]. More recent international evidence conceptualized workplace integration as a multidimensional and time-dependent process involving communication, cultural competence, socialization, professional values, knowledge advancement, and skill utilization [8].

Nevertheless, IENs are often examined as a broad workforce category despite substantial differences in their educational preparation, migration histories, languages, professional identities, and sociocultural backgrounds. Aggregating these diverse populations may obscure country-specific migration pathways and professional transition experiences that shape how nurses enter, adapt to, and remain in the workforces of destination countries. Assessing IENs' perspectives according to their country of education may therefore reveal pathways and experiences that remain hidden when IENs are treated as a homogeneous population. Yet little is known about how Brazilian-educated nurses navigate migration, credential recognition, entry into U.S. nursing practice, and subsequent workplace integration, in part because they form a geographically dispersed group that is not enumerated in any registry or sampling frame.

International nurse migration encompasses more than the decision to relocate. It may involve sequential and overlapping processes of migration, credential recognition, transition to a new scope and culture of practice, and adaptation to the social and organizational environment of the destination country. Evidence specifically addressing international mobility among Brazilian nurses remains limited. This gap is notable because Brazil has one of the largest nursing workforces in the world [1], and Brazilian nurses enter practice with a four- to five-year baccalaureate degree, frequently followed by postgraduate specialization or residency, which positions them as a potentially strategic source of internationally recruited nurses as destination countries diversify their recruitment.

Previous research in Brazil documented nurses' migration patterns and called for greater attention to motivations and international mobility [9]. At the same time, international evidence suggests that nurses' migration decisions are shaped by interacting economic, professional, social, family, safety, and political conditions rather than salary alone [10]. This complexity is also evident in research with Mexican IENs, in which economic and working conditions were important migration drivers but intersected with opportunities for professional development, language acquisition, credential recognition, safety, and broader social and cultural experiences in the destination country [5, 6]. Understanding the experiences of Brazilian IENs who have entered nursing practice in the United States may therefore provide insight into both the migration decision and the professional transition that follows credentialing and licensure. In this study, we sought to examine migration drivers, credentialing and transition-to-practice experiences, workplace integration, and future career intentions among Brazilian-educated nurses in the United States.

Methods

Study design

This study used a convergent mixed-methods design with equal priority assigned to the quantitative and qualitative components. Survey recruitment remained open from February to May 2024, and follow-up interviews were conducted between March and April 2024; therefore, quantitative and qualitative data collection overlapped temporally. Interview participants were recruited from survey respondents who volunteered for follow-up rather than being selected based on

interim quantitative findings. The quantitative component consisted of closed-ended questions from an online cross-sectional survey, whereas the qualitative component comprised open-text survey responses and semi-structured follow-up interviews.

Component-specific analyses were conducted separately and subsequently integrated through comparison across data sources and the development of a joint display [11–13]. A convergent design was chosen because no sampling frame exists for this population and a small sample was anticipated; collecting closed-ended, open-text, and interview data concurrently from the same respondents was intended to offset limited statistical breadth with explanatory depth and to allow divergences between data sources to be examined rather than averaged away. Reporting was informed by the Strengthening the Reporting of Observational Studies in Epidemiology guideline for the cross-sectional component [14], the Consolidated Criteria for Reporting Qualitative Research for the interview component [15], and the Good Reporting of a Mixed Methods Study recommendations for the overall mixed-methods design [16]. The completed checklists are provided as Additional files 1, 2, and 3.

Setting, eligibility, and recruitment

The study sample comprised nurses who had completed their entry-to-practice nursing education in Brazil and were currently practicing as registered nurses in the United States. Individuals were eligible if they had completed their nursing education in Brazil, held current U.S. registered nurse licensure, and were currently employed as a registered nurse in the United States. No minimum duration of U.S. registered nursing practice was required, and no restrictions were imposed based on specialty or practice setting.

Because no sampling frame was available for this geographically dispersed population, participants were recruited through convenience sampling and online snowball sampling. The study invitation was disseminated through social media and professional networks, and participants were encouraged to share it with other potentially eligible nurses as part of the snowball recruitment process. Survey data were collected between February and May 2024.

Thirty-eight survey responses were received. Two responses were excluded as ineligible: one did not meet the eligibility criteria, and one respondent had completed the nursing degree in the United States rather than in Brazil. The final analytic survey sample therefore comprised 36 participants.

Survey instrument and data collection

Data were collected using a researcher-developed questionnaire administered through Google Forms. The questionnaire collected data on participants' sociodemographic and professional characteristics; migration characteristics and drivers; previous and current nursing work; and intention to continue working in the United States. Participants could select multiple migration drivers. Open-text questions explored how participants learned about U.S. nursing opportunities, circumstances surrounding their migration decision, challenges encountered during migration, credentialing and professional transition, cultural and workplace challenges, and future professional plans. For example, participants were invited to describe how they first learned about opportunities to practice nursing in the United States and the main challenges they experienced during migration, credentialing, and professional transition. The questionnaire was developed for this exploratory study and has not undergone formal psychometric validation.

Follow-up interviews

At the end of the survey, participants could indicate whether they were willing to take part in a follow-up virtual interview conducted via a videoconferencing platform, such as Google Meet or Zoom. Thirty respondents indicated their willingness

to be contacted. Eight participants ultimately responded to subsequent contact and scheduled and completed an interview during March-April 2024. The interview participants therefore constituted a self-selected volunteer subsample rather than a purposive sample. Interviews revisited and expanded survey topics, including migration motivations, credentialing and language requirements, transition to U.S. nursing practice, workplace support, professional autonomy and responsibility, and future career plans. Prompts invited participants to explain, for example, why they considered migration and to describe their experience of entering and adapting to U.S. nursing practice.

All interviews were conducted by the first author in Portuguese using a flexible conversational format. They were conducted synchronously by real-time audio and video at times scheduled according to participants' availability, lasted approximately 20–30 minutes, were audio-recorded with participants' permission, and were transcribed for analysis. Quotations presented in this article were translated from Portuguese into English by the research team, with attention to preserving the original meaning.

Quantitative analysis

Survey data were reviewed for eligibility, completeness, internal consistency, and implausible values before analysis. Categorical variables are reported as frequencies and percentages. Approximately symmetric continuous variables are summarized using means and standard deviations (SDs); skewed variables are reported using medians, interquartile ranges (IQRs), and ranges. For multiple-response questions, each response option was treated as a separate indicator, so percentages do not sum to 100%. Responses that were internally contradictory or could not be interpreted consistently were treated as missing for the specific analysis rather than imputed. No inferential analyses were undertaken because of the small non-probability sample and the exploratory objectives of the study. Quantitative analyses were performed using IBM SPSS Statistics, version 29.0.

Open-text survey response analysis

Open-text survey responses were interpreted using inductive descriptive content analysis [17]. Responses were read in full and coded according to explicit semantic content. Codes were developed to reflect participants' own wording, compared across responses, and grouped into broader descriptive domains. Because individual responses frequently detailed more than one issue, multiple codes could be assigned to the same response. Coding frequencies were used to describe the breadth of recurring issues within the sample and were not interpreted as population prevalence estimates. Open-text responses were used to contextualize the closed-ended survey findings and to examine whether issues introduced in the interview subsample were also evident across the broader survey sample.

The qualitative analyses were conducted manually in spreadsheets by the first author under the supervision of the senior research advisor. The coding framework, category development, and interpretation of findings were subsequently reviewed, discussed, and refined with the broader research team to enhance analytic consistency and interpretive credibility.

Interview analysis

Interview transcripts were analyzed inductively using qualitative content analysis [17]. Segments of text relevant to the study objectives were coded in terms that reflected participants' own accounts; related codes were compared across interviews and organized into broader descriptive analytic categories. Analysis considered recurring patterns as well as divergent and contrasting experiences. Saturation was not used as a stopping criterion because the interviews represented a follow-up volunteer subsample and were intended to provide explanatory depth within the mixed-methods design.

Mixed-methods integration

After component-specific analyses, closed-ended survey findings were compared with patterns identified in open-text responses and with detailed interview accounts. A joint display was used to place evidence from the three sources side by side. Relationships across sources were examined for convergence, complementarity/expansion, and divergence or dissonance, and these relationships informed the generation of mixed-methods meta-inferences concerning migration motivations, access to migration information, the distinction between regulatory eligibility and readiness for practice, organizational support, perceived autonomy and accountability, and post-migration career and retention intentions [11–13]. In this study, practice readiness refers to participants’ reported ability to navigate clinical communication, technologies, workflows, role expectations, and organizational routines after licensure; clinical competence was not objectively assessed.

Reflexivity

The interviews were conducted by the first author, an undergraduate nursing student researcher, as part of her undergraduate research project. At the time of data collection, she had previous personal experience living in the United States and an academic and personal interest in international nurse migration. Participants were aware that the study was part of her undergraduate research. Her familiarity with the migration context facilitated rapport but may also have influenced the conversational direction of some interviews.

Ethical considerations

The study was approved by the Human Research Ethics Committee of the Federal University of Santa Catarina, Brazil (CAAE 74882723.0.0000.0121). Participants accessed an electronic informed consent form before beginning the survey. Participation was voluntary, and study data were treated confidentially. Interview quotations are reported using participant codes consisting of the letter P followed by a sequential number, and potentially identifying details were omitted or generalized to preserve participants’ anonymity.

Use of generative artificial intelligence

OpenAI ChatGPT (GPT-5.6 Sol) was used during manuscript development to support language editing, translation, and manuscript structuring. The authors reviewed and revised the content as necessary and take full responsibility for the accuracy, integrity, and final content of the manuscript.

Results

Participant characteristics and migration profile

Table 1 presents a summary of the characteristics of the study sample. The final survey sample comprised 36 Brazilian-educated nurses working in the United States, of whom eight completed follow-up interviews. The mean age was 36.7 years (SD = 6.1; range, 27–50), and 32 (88.9%) were women. The majority of the participants (61.1%) reported a postgraduate specialization or residency as their highest nursing qualification, three (8.3%) held a master's degree, and one (2.8%) held a doctoral degree. Half (18/36, 50.0%) had completed their nursing education in Southeastern Brazil. Florida was the most frequently reported state of residence or practice (11/36, 30.6%), followed by Massachusetts (4/36, 11.1%), with the remainder distributed across multiple U.S. states. Regional distributions describe this convenience sample and should not be interpreted as regional migration rates.

Most participants (61.1%) migrated with a spouse or another family member. According to self-reported immigration status, 30 described themselves as permanent residents, four as U.S. citizens, and two nonimmigrants. Thirty participants reported previous nursing employment in Brazil. Among them, median previous nursing experience was 7 years (IQR, 2–

10; range, 1–21). Participants had been practicing nursing in the United States for a median of 18 months (IQR, 8.25-25; range 0.25-84 months), and 30 (83.3%) reported hospital-based employment. All but one participant (97.2%) intended to continue working as nurses in the United States.

Table 1
Participant characteristics (N = 36)

Characteristic	n (%) or summary
Age, years, mean (SD)	36.7 (6.1)
Age range, years	27–50
Women	32 (88.9)
Men	4 (11.1)
Undergraduate degree as highest qualification	10 (27.8)
Specialization/residency	22 (61.1)
Master's degree	3 (8.3)
Doctoral degree	1 (2.8)
Southeast Brazil	18 (50.0)
Northeast Brazil	10 (27.8)
South Brazil	5 (13.9)
North Brazil	2 (5.6)
Central-West Brazil	1 (2.8)
Migrated with spouse/family	22 (61.1)
Migrated alone	14 (38.9)
Self-reported permanent resident	30 (83.3)
U.S. citizen	4 (11.1)
Nonimmigrant	2 (5.6)
Previous nursing employment in Brazil	30 (83.3)
Hospital-based practice in the United States	30 (83.3)
Intention to remain working as a nurse in the United States	35 (97.2)
Time practicing in the United States, median months (IQR)	18 (8.25-25)

Migration emerged as a multidimensional life and professional project

Across data sources, migration emerged as a multidimensional life and professional project –

that is, a longer-term plan for family and personal life within which nursing was one component (Tables 2 and 3). In the closed-ended survey questions, the most frequently selected drivers were quality of life (31/36, 86.1%), professional recognition (24/36, 66.7%), opportunities for professional growth (24/36, 66.7%), public safety (23/36, 63.9%), higher salaries (21/36, 58.3%), greater employability (20/36, 55.6%), and better working conditions (19/36, 52.8%). These patterns converged with open-text accounts of family circumstances, previous international experiences, children's needs, work-life

considerations, and longstanding aspirations to live abroad. Interviews added that nursing was not always the original reason for migration: for some participants, nursing provided a viable professional pathway within an already broader family or life project, whereas others had decided to migrate before reconstructing their nursing careers in the United States.

"Being a nurse is a tool that brings a person to the U.S. ... but what brought me here was not necessarily the benefits I would have as a nurse, but as a mother, a wife and a person." (P04, interview)

"We never came thinking mainly about the money. We came thinking about the life experience...security, quality of life, and the personal and professional opportunities it could bring us." (P01, interview)

Table 2
Migration drivers and descriptive coding of key open-text survey domains (N = 36)

Domain	Code/response	n (%)
Closed-ended migration drivers	Quality of life	31 (86.1)
	Professional recognition	24 (66.7)
	Professional growth opportunities	24 (66.7)
	Public safety	23 (63.9)
	Higher salaries	21 (58.3)
	Greater employability	20 (55.6)
	Better working conditions	19 (52.8)
	Political/economic situation in Brazil	14 (38.9)
	Migration related to spouse's employment	6 (16.7)
How participants learned about U.S. nursing	Digital/online sources	19 (52.8)
	Personal/professional networks	9 (25.0)
	Previous U.S./international exposure	4 (11.1)
	Institutional/professional/legal source	4 (11.1)
	Own research, source unspecified	2 (5.6)
Challenges in migration/credentialing/practice	Language proficiency/communication	18 (50.0)
	Bureaucracy/documentation/delays	17 (47.2)
	Psychosocial/family/cultural issues	8 (22.2)
	Examinations/study requirements	6 (16.7)
	Transition to U.S. practice	6 (16.7)
	Lack of information/uncertainty	5 (13.9)
	Financial costs	4 (11.1)
	Workplace relationships/support	3 (8.3)
Cultural/workplace integration	Practice/system/technology differences	16 (44.4)
	Clinical communication/language	15 (41.7)
	Sociocultural/interpersonal adaptation	12 (33.3)
	Little/no specific difficulty	5 (13.9)
	Workplace expectations/support/feedback	3 (8.3)
	Explicit discrimination/prejudice	1 (2.8)
Future career intentions	Postgraduate education	16 (44.4)
	Advanced practice	13 (36.1)
<i>Note: Migration-driver responses and open-text codes were non-mutually exclusive. Open-text frequencies represent the number of participants whose responses were coded to each category within this sample and should not be interpreted as population prevalence estimates.</i>		

Domain	Code/response	n (%)
	Specialty-oriented trajectory/certification	11 (30.6)
	Gain experience/adapt/career growth	10 (27.8)
	Work-life balance/leave bedside	4 (11.1)
	Travel nursing	2 (5.6)
	Research	2 (5.6)
	Independent practice/business	2 (5.6)
<i>Note: Migration-driver responses and open-text codes were non-mutually exclusive. Open-text frequencies represent the number of participants whose responses were coded to each category within this sample and should not be interpreted as population prevalence estimates.</i>		

Migration information became more accessible, but the pathway remained fragmented

The open-text responses and interviews complementarily demonstrated how participants navigated migration information. Nineteen participants (52.8%) mentioned digital or online sources such as social media, search engines, blogs, or online videos, and nine (25.0%) mentioned personal or professional networks. Interviews further differentiated these patterns across migration trajectories: participants who began the process earlier described informal groups, individual contacts, and collective trial and error, whereas more recent trajectories often involved social media, courses, and consultancy services. At the same time, participants cautioned that greater access to online information did not necessarily translate into realistic expectations about language, credentialing, and workplace transition.

“We discovered the whole process together...through each other's mistakes and successes.” (P06, interview)

Regulatory eligibility and practice readiness represented distinct stages of transition

The integrated evidence distinguished barriers to entering practice from challenges experienced while functioning within practice. In open-text responses about migration, credentialing, and the professional pathway, language proficiency/communication was coded in 18 responses (50.0%) and bureaucracy/documentation/delays were documented in 17 (47.2%). When participants described cultural and workplace integration, the emphasis shifted toward differences in professional practice, health system organization, or technology (16/36, 44.4%) and clinical communication/language (15/36, 41.7%). Interviews deepened this distinction: formal language requirements did not eliminate difficulty with specialty terminology, accents, telephone communication, rapid interprofessional exchanges, communication with families, unfamiliar technologies, documentation systems, protocols, and expectations for clinical responsibility.

“One thing is studying English to pass the exams, and another thing is knowing real English here.” (P04, interview)

Taken together, the three data sources indicated that licensure and formal regulatory requirements established eligibility to practice but did not necessarily confer immediate readiness to function within a new healthcare system.

Organizational preparedness shaped workplace integration

Interview responses revealed that workplace transition varied substantially according to organizational preparation. Some participants described structured orientations, residency programs, preceptorships, and supervised clinical transitions that supported their learning of U.S.-specific routines and technologies. Others described insufficient preparation or difficult preceptorship relationships. One participant who entered a high-acuity setting described language, technology, and scope-

of-practice differences occurring alongside inadequate institutional preparation and ultimately left the employer. These contrasting experiences indicate that transition was not solely an individual adaptation process: the receiving organization's preparedness and the quality of orientation programs and preceptorships shaped how participants experienced entry into U.S. practice.

"The hospital where I was hired was not prepared to receive us." (P06, interview)

Professional recognition and autonomy were accompanied by accountability

Responses to the closed-ended questions and interview findings converged to portray professional recognition and career growth as attractive but not uncomplicated. Professional recognition and opportunities for growth were each selected by 24 participants (66.7%) as migration drivers. In the interviews, participants described greater involvement in clinical decisions, wider career possibilities, and perceived recognition of nursing expertise, while also emphasizing greater responsibility, accountability, and expectations for clinical judgment. The integrated interpretation was therefore not unrestricted autonomy, but adaptation to a different configuration of scope, responsibility, and interprofessional practice.

"As you grow in the profession, you also bring a lot of responsibility with you." (P01, interview)

Career development and retention remained heterogeneous

The findings related to career development and retention showed both convergence and dissonance across data sources. Sixteen participants (44.4%) explicitly mentioned postgraduate education, 13 (36.1%) mentioned advanced practice roles, and 11 (30.6%) mentioned a specialty-oriented trajectory or certification; other plans involved gaining experience, travel nursing, research, independent practice, or leaving bedside work to improve work-life balance. Although 35 of 36 participants intended to continue working as nurses in the United States, interview responses showed that this intention could coexist with family separation, social adaptation, workplace dissatisfaction, and uncertainty about long-term residence. One participant with extensive prior nursing experience in another high-income country offered a contrasting case, describing U.S. employment less positively than her previous international experience. Thus, intention to remain did not equate to uniformly positive migration or workplace experiences.

Table 3
Mixed-methods joint display: integration patterns and meta-inferences

Integrated domain	Survey evidence	Interview evidence	Integration pattern	Meta-inference
Migration as a broader life project	Closed-ended: quality of life 86.1%; recognition 66.7%; growth 66.7%; safety 63.9%; salary 58.3%. Open-text: family circumstances, prior international experiences, children, and work-life considerations.	Nursing sometimes enabled a pre-existing family/life project rather than constituting the sole reason for migration.	Convergence + expansion	Migration reflected intersecting professional, family, safety, and quality-of-life considerations rather than income alone.
Navigating migration information	Open-text: digital/online sources 52.8%; personal/professional networks 25.0%; fragmented information also reported.	Earlier pathways relied more on peer discovery; later pathways more often involved social media, courses, and consultancies. Greater access did not eliminate unrealistic or incomplete expectations.	Complementarity + expansion	Access to migration knowledge expanded over time, but the pathway remained uneven and could simplify transition demands.
From eligibility to practice readiness	Open-text: language/communication 50.0% and bureaucracy/documentation/delays 47.2% in the migration/credentialing pathway; practice/system/technology differences 44.4% and clinical communication 41.7% in workplace integration.	Formal requirements did not eliminate difficulty with clinical communication, technologies, documentation, routines, and professional responsibilities.	Convergence + expansion	Regulatory eligibility and immediate practice readiness were related but distinct stages of transition.
Autonomy, accountability, and organizational support	Closed-ended: recognition and growth each 66.7%. Open-text: workplace expectations/support/feedback appeared in integration accounts.	Greater perceived autonomy coexisted with greater responsibility, while orientation and preceptorship varied markedly across employers.	Complementarity + expansion	Workplace integration depended on both the nurse's adaptation and the receiving organization's preparedness.
Career and retention after migration	Intention to remain 97.2%; postgraduate education 44.4%; advanced practice 36.1%; career plans were diverse and overlapping.	Family ties, life stage, prior international experience, and workplace dissatisfaction complicated otherwise high intention to remain.	Divergence/dissonance + expansion	High retention intention did not imply uniformly positive migration or workplace experiences.

Discussion

This mixed-methods study provides a country-specific account of international migration and transition to U.S. practice among nurses educated in Brazil. Its central contribution is the distinction between achieving regulatory eligibility and becoming ready to function within a new practice environment. Across the integrated findings, migration was embedded in broader life projects; formal credentialing and language requirements did not eliminate context-specific learning needs; organizational preparation shaped workplace integration; and high intention to remain in the United States coexisted with heterogeneous professional and personal experiences. Together, these findings position migration as an extended professional resocialization process rather than a credentialing event that ends at licensure.

The findings reveal a stage beyond licensure in which nurses translated their prior education and clinical experience into a new regulatory, communicative, technological, and organizational context. This process depended not only on participants' individual preparation but also on the receiving organizations' capacity to provide clinically relevant language support, structured orientation, effective preceptorships, and sustained professional integration. By documenting these experiences among Brazilian-educated nurses, the study contributes a country-specific perspective to the international literature and indicates that ethical nurse migration should extend beyond recruitment and regulatory entry to encompass shared responsibility for practice readiness, workplace integration, and a sustainable professional transition.

Migration as a multidimensional and country-specific transition

Most participants had established professional trajectories in Brazil, and a substantial proportion had completed postgraduate education before migration. The predominance of nurses educated in the Southeast and Northeast may partly reflect the geographic distribution of nursing education in Brazil, where training capacity has historically been concentrated in these regions [18]. Nevertheless, given the non-probability recruitment strategy, the regional distribution observed in this study should not be interpreted as evidence of higher migration propensity from these regions.

Quality of life was the most frequently selected migration driver, followed by professional recognition, opportunities for career growth, and public safety. Although cited less frequently, higher salaries were also relevant. The qualitative data enhanced these findings by showing how migration decisions were embedded in family projects, prior international experiences, safety concerns, work-life expectations, and aspirations for personal and professional mobility. This multidimensional pattern is consistent with evidence that nurse emigration is shaped by interacting economic, professional, social, family, environmental, and political factors rather than remuneration alone [10]. Similar multidimensional transitions have been described among Mexican nurses who migrated to Germany, whose experiences encompassed economic and working conditions, language, recognition of previous education, migration-related costs, safety, discrimination, and sociocultural adaptation [7].

The Brazilian findings add a useful country-specific nuance. Several participants described professional mobility as attractive even when they had previously held stable employment or comparatively favorable salaries in Brazil. Their narratives emphasized the perceived rewards for their work, safety, career possibilities, and flexibility. These findings do not demonstrate objectively better working or living conditions in the United States; rather, they indicate how participants understood the tradeoffs associated with migration. Country-specific analysis is important because migrant nurses' experiences are shaped by their respective countries' education, labor conditions, language, and migration histories, which may be lost when IENs are treated as a single category [8, 19].

From licensure to practice readiness: communication and organizational support

The communication and language challenges revealed in this study closely align with prior reviews of IEN transition in the United States [3, 4]. The integrated findings, however, add a distinction that is relevant to transition policy and workforce

support: formal language proficiency and regulatory eligibility were not experienced as equivalent to immediate readiness for practice. Participants who had already met entry requirements described ongoing challenges with accents, specialty terminology, telephone communication, patient education, rapid interprofessional exchanges, technologies, documentation, workflows, and role expectations. “Practice readiness” here refers to participants' reported experience of functioning within these contextual demands and should not be interpreted as an objective assessment of clinical competence.

Recent evidence from bridging programs for IENs similarly showed that differences in prior education, professional experience, and local-language competence continue to shape nurses' learning needs during their professional integration, even after they have entered formal recertification pathways [20]. This interpretation is consistent with the broader concept of workplace integration as a multidimensional process involving communication, professional socialization, knowledge advancement, skill utilization, and adaptation to host-system values [8]. The findings therefore support viewing transition as professional resocialization rather than remediation of an individual deficit. Previous Brazilian education and clinical experience remained relevant, but participants had to learn how their existing competence translated into a new regulatory and organizational environment.

The variation in orientation and preceptorship experiences reinforces the organizational dimension of practice readiness. Reviews of IENs in U.S. settings have identified orientation quality and organizational support as important to transition, job satisfaction, and retention [3], while a meta-synthesis of migrant African nurses highlighted the importance of tailored adaptation and support strategies in destination health systems [21]. In the present study, structured residency, supervised orientation, and supportive preceptorship facilitated learning, whereas insufficient preparation amplified uncertainty, even among nurses with substantial previous experience. More broadly, practice-environment research indicates that organizational conditions influence nurses' well-being and the quality of nursing care [22].

These findings shift the interpretation away from the idea that migrant nurses simply need greater resilience, confidence, or English proficiency. Workplace integration is jointly produced by the nurse and the receiving organization. Employers should therefore recognize both the expertise IENs bring and the context-specific learning they still require. Clinically relevant communication support, protected orientation, psychologically safe opportunities to ask questions, and sustained preceptor support may be more appropriate than routine onboarding alone [3, 8, 21].

Professional development, retention, and personal costs

Professional recognition and career growth were prominent migration drivers, and many participants described postgraduate education, advanced practice, specialty certification, research, and independent practice as future possibilities. These findings resonate with qualitative research among Asian IENs in the United States, whose career advancement was shaped by educational opportunities, personal motivation, family and cultural influences, and available time and resources [23]. In the present study, career advancement was not a uniform progression toward advanced practice. Some participants prioritized clinical specialization or greater experience, while others valued leaving bedside care or improving work-life balance.

Similarly, the very high intention to remain in U.S. nursing practice should be interpreted cautiously. The sample included only nurses who had successfully navigated credentialing and reached registered nurse practice. Nurses who abandoned the process, did not obtain licensure or employment, or returned before entering practice were not represented. Therefore, the finding describes successful entrants rather than the probability of successful migration among Brazilian nurses considering this pathway. Interviews also showed that intention to remain could coexist with family separation, social costs, workplace dissatisfaction, or uncertainty about long-term residence.

Implications for ethical international nurse mobility

The findings have practical implications for several stakeholders involved in international nurse migration. Employers should move beyond recruitment and licensure toward sustained professional integration through structured orientation, supportive preceptorship, clinically relevant communication support, protected learning opportunities, and follow-up beyond initial onboarding. Nursing education and transition programs can complement regulatory preparation by addressing clinical communication, documentation, role expectations, and professional socialization in the destination system. Recruiters should provide realistic pre-migration information about credentialing timelines, workplace expectations, professional responsibilities, and transition demands, particularly because many participants relied on digital sources when forming their expectations about U.S. nursing practice.

For regulators and policymakers, transparent credentialing pathways and ethical recruitment should be considered alongside mechanisms that support integration after entry to practice. From a source-country perspective, these findings should not be interpreted as evidence that nurse migration should be discouraged: professional mobility is an individual right and can generate education, transnational networks, and career opportunities. At the same time, participants' emphasis on quality of life, safety, recognition, working conditions, and career development suggests that retention policies cannot be reduced to salary. Brazil's position as a source country is relevant here. Brazil has the largest nursing workforce in Latin America, with more than three million professionals registered with the Federal Nursing Council [24], and nursing employment grew by approximately 44% between 2017 and 2022, concentrated in the public sector and in the Southeast [18]. This growth, however, has been accompanied by an accelerated, largely private, and increasingly distance-based expansion of undergraduate nursing education, average earnings of two to three minimum wages, multiple job-holding, and heavy workloads [18, 25]. The drivers reported by our participants—quality of life, professional recognition, public safety, salaries, and working conditions—mirror these domestic conditions and the scenario highlighted in the debate on the WHO Global Code, in which the expansion of health-worker production is not matched by attractive employment [1, 2]. Combined with baccalaureate entry-to-practice education and the high prevalence of postgraduate qualifications observed in this sample, these conditions make Brazilian-educated nurses a potentially strategic pool for international recruiters as destination countries diversify their source countries. The question, therefore, is less whether Brazilian nurses will migrate than how recruitment can be managed so that benefits are shared with the Brazilian health system, as the Code's co-investment and proportionate-benefit provisions intend [2]. The 2026 amendment to the WHO Global Code further emphasizes co-investment and proportional benefits for source and destination systems [2]. Emigration to the United States is currently modest relative to the size of the Brazilian workforce but steady: between 2023 and 2025, 574–669 Brazilian-educated nurses per year took the NCLEX-RN for the first time (about 1% of all internationally educated first-time candidates), with first-time pass rates of 37–49% [26–28]. Although this study was not designed to estimate the scale of Brazilian nurse emigration or its effect on national workforce supply, it identifies a pathway that warrants monitoring as international recruitment grows.

Strengths and limitations

This study has several strengths. It focuses on a geographically dispersed and difficult-to-identify population about whom little evidence specific to country of education is available. The convergent mixed-methods approach captured both breadth and contextual depth and was chosen precisely because a large probability sample was not feasible: integrating closed-ended, open-text, and interview data from the same participants allowed a small sample to be examined from three angles and made divergences between sources explicit rather than averaging them away. Open-text survey responses provided qualitative breadth across the wider sample, while interviews elaborated and sometimes challenged more straightforward interpretations of the survey findings. The joint display made convergence, complementarity/expansion, and divergence/dissonance explicit and linked these relationships to meta-inferences.

Important limitations must also be considered. Convenience sampling and online snowball recruitment preclude claims of representativeness. At the same time, the population of Brazilian-educated nurses practicing in the United States is still emerging: only a few hundred take the NCLEX-RN for the first time each year [26–28], and no registry enumerates those already in practice, so 36 participants recruited across multiple states constitute a non-trivial sample of a dispersed, hard-

to-reach, and so far under-studied group. The study included only nurses who had successfully reached U.S. registered nurse practice, creating a substantial survivorship or selection effect. The sample was small and distributed across multiple states and practice settings, so regulatory and organizational differences may have contributed to experiences that cannot be attributed to migration status alone. Most variables were self-reported, and some relied on retrospective recall. Several survey items allowed heterogeneous interpretation; ambiguous values were therefore excluded from specific analyses rather than imputed.

The researcher-developed survey used in this study has not undergone formal psychometric validation. Frequencies derived from open-text coding describe coded mentions in this sample and should not be treated as population prevalence estimates. The follow-up interview sample was self-selected, and saturation was not used as a stopping criterion. Finally, interviews were conversational and conducted by a researcher with previous personal experience living in the United States and a stated interest in international nurse mobility. This familiarity may have facilitated rapport but may also have shaped some questions and responses. Analysis therefore prioritized participant-generated accounts, did not treat interviewer statements as data, and gave particular attention to contrasting cases.

Conclusions

Migration into U.S. nursing practice among Brazilian-educated nurses in this study was experienced not as a single movement from one workforce to another, but as an extended professional and life transition. Migration decisions were embedded in aspirations related to quality of life, safety, family circumstances, professional recognition, and career development. The central integrated finding was that credentialing and licensure established formal eligibility to practice, while readiness to function within a new clinical and organizational environment continued to develop after entry into the workforce.

Workplace integration was shaped by both individual adaptation and organizational conditions. Clinical communication, unfamiliar technologies and routines, different professional responsibilities, and new organizational expectations remained salient after licensure. Structured orientation, supportive preceptorship, and opportunities to learn within the receiving system facilitated transition, whereas insufficient preparation could intensify uncertainty, even among nurses with previous professional experience. High intention to remain in U.S. nursing practice did not translate into uniformly positive professional or personal experiences.

International nurse recruitment should therefore extend beyond facilitating migration and licensure to supporting sustained professional integration. Employers, educators, recruiters, regulators, and policymakers each have a role in aligning realistic pre-migration information, clinically relevant preparation, structured transition support, and ethical workforce planning. Such approaches should recognize nurses' right to mobility while considering the responsibilities of both source and destination health systems.

Abbreviations

IEN, internationally educated nurse; IQR, interquartile range; SD, standard deviation; WHO, World Health Organization

Declarations

Ethics approval and consent to participate

The study was approved by the Human Research Ethics Committee of the Federal University of Santa Catarina (CAAE 74882723.0.0000.0121). Electronic informed consent was obtained from all survey participants, and interview participants additionally consented to take part in, and to the audio recording of, the follow-up interviews.

Consent for publication

Not applicable. Interview quotes are anonymized and potentially identifying contextual details have been omitted or generalized.

Availability of data and materials

The datasets generated and analyzed during the current study are not publicly available because the small and highly specific study population creates a risk of participant re-identification, but de-identified data are available from the corresponding author on reasonable request, subject to approval by the responsible research ethics committee.

Competing interests

The authors declare that they have no competing interests.

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Authors' contributions

IBS and JLGS conceived and designed the study. IBS collected the survey data, conducted the interviews, performed the quantitative and qualitative analyses, and drafted the manuscript. JLGS supervised the study design, data collection, analysis, and mixed-methods integration and critically revised the manuscript. BG, MHSS, DGC, ECNF, and HFS contributed to data interpretation and critically revised the manuscript for important intellectual content. All authors read and approved the final manuscript.

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