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Patient-centered communication, social entrepreneurship motivation, and entrepreneurial intentions in nursing students: A structural equation modelling approach

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ABSTRACT

Introduction: The growing demand for homecare nursing in Indonesia offers important career opportunities; however, how clinical competencies are translated into entrepreneurial choices remains unclear. This study examined the relationship between patient-centered communication (PCC) and social entrepreneurship (SE) motivation with nursing students' entrepreneurial intentions (EI) to establish homecare practices.

Methods: A cross-sectional survey was conducted with 208 nursing students in West Sumatra, Indonesia. Data collected with validated instruments for EI (α = 0.90), SE drive (α = 0.94), and PCC (α = 0.92) were analyzed using partial least squares structural equation Modelling (PLS-SEM).

Results: PLS-SEM showed that PCC did not directly influence EI (β = -0.050, p = 0.669) but significantly predicted SE motivation (β = 0.604, p < 0.001). SE motivation significantly predicted EI (β = 0.627, p < 0.001) and fully mediated the PCC–EI relationship (β indirect = 0.379, p < 0.001). The model explained 35.8% of EI variance.

Conclusions: Clinical communication competencies alone do not predict entrepreneurial intentions; rather, they appear to require activation through motivation for social entrepreneurship. Therefore, nursing education should adopt integrated pedagogical frameworks that connect clinical empathy with social-business models to foster homecare as a viable career pathway.

Keywords: entrepreneurial intentions, homecare nursing, nursing career, patient-centered communication, social entrepreneurship

Introduction

The global healthcare landscape is changing in response to demographic aging, epidemiological transitions, and increasing patient preferences for community-based care. Worldwide, the proportion of individuals aged 60 years and above is projected to reach 2.1 billion by 2050, increasing the demand for homecare nursing services (World Health Organization, 2025). In Indonesia, this trend is evident, as the country's elderly population is projected to reach 43.9 million by 2035, creating a critical need for skilled homecare professionals (Ministry of Health, 2021). Despite this growing demand, most Indonesian nursing graduates continue to seek employment in hospital settings, where institutional nursing is perceived to offer greater occupational security and financial stability (Raharto and Noveria, 2020; Efendi *et al.*, 2021; Gunawan and Juanamasta, 2022). Consequently, entrepreneurial career pathways in nursing, particularly in homecare and community-based services, remain underexplored among nursing students. Previous studies suggest that psychological and professional factors, such as communication competence, empathy, and social value orientation, may influence students' willingness to pursue entrepreneurial

nursing careers (Fernández-Medina et al., 2021; Almegewly, Alotaibi and Karavasileiadou, 2023). Therefore, understanding how patient-centered communication and social entrepreneurship motivation contribute to entrepreneurial intentions is important for preparing nursing graduates to meet emerging community healthcare demands.

Homecare nursing offers a potential entrepreneurial pathway for nursing graduates, providing professional autonomy, schedule flexibility, and the opportunity for holistic, patient-centered care (Watson *et al.*, 2020; Woodworth, 2022). The homecare sector addresses the independence and quality-of-life needs of elderly and chronically ill populations and aligns with contemporary nursing philosophies emphasizing individualized, community-integrated care (Meriç *et al.*, 2019). International evidence suggests that nursing students with strong interpersonal communication competencies and social awareness are more inclined to consider community-based career alternatives (Fernández-Medina *et al.*, 2021; Almegewly, Alotaibi and Karavasileiadou, 2023). However, empirical evidence examining the psychological and educational determinants of nursing students' entrepreneurial intentions in homecare in low- and middle-income countries remains limited.

Entrepreneurial intention, defined as the intention to establish a new business venture, is commonly theorized within the framework of Ajzen's Theory of Planned Behavior (Liñán and Chen, 2009). Within nursing, entrepreneurial intention reflects students' aspirations to create independent practice entities, such as homecare businesses, rather than pursuing salaried employment (Ha *et al.*, 2024). Research has consistently demonstrated that entrepreneurial intentions are shaped by a combination of personal competencies, motivational orientations and educational experiences (Turker and Selcuk, 2009; Nuari Harmawan and Al Farizi, 2025). Patient-centered communication (PCC), encompassing active listening, empathic engagement, shared decision-making, and clear information exchange, is regarded as a foundational nursing competency, particularly in homecare contexts, where nurses frequently function as primary coordinators of care for patients and families (Dalsmo *et al.*, 2022; Moser *et al.*, 2022; Almegewly, Alotaibi and Karavasileiadou, 2023). Social entrepreneurship, characterized by the pursuit of innovative solutions to social problems with an emphasis on community benefit rather than personal profit, has emerged as an important motivational framework within healthcare professions education (Carraher, Welsh and Svilokos, 2016). Nursing students with strong social entrepreneurial orientation are likely to perceive homecare ventures as economic activities and expressions of their commitment to social justice and community service (Dai *et al.*, 2021; Abdel-Fattah, El-Sherbini and Mitwally, 2022).

The integration of PCC into the SEI framework relies on the convergence of empathy and prosocial motivation. While traditional models such as the Theory of Planned Behavior (TPB) emphasize generic attitudes, recent evidence suggests that PCC functions as a foundational attitudinal substrate (Furdui, Lupu-Dima and Edelhauser, 2021; Wang and Yee, 2023). Specifically, the empathic core of PCC is an important predictor of SEI, both directly and indirectly through the mediation of moral obligation (Razzak and Riyami, 2023). By fostering a deep awareness of others' vulnerabilities, PCC may heighten students' sense of responsibility toward social problems, thereby translating communicative competence into a cognitive disposition to create social value (Gangadhara *et al.*, 2025). Thus, in this study, PCC is not merely a clinical skill but a psychological antecedent that shapes the motivational structure required for nursepreneurship.

Rather than replicating the generic constructs of the Theory of Planned Behavior (TPB)—namely, attitude, subjective norms, and perceived behavioral control—this study proposes a domain-specific adaptation of the intentionality paradigm. This study argues that generic cognitive antecedents are insufficient to capture the specialized professional landscape of nursing. Consequently, this study operationalizes patient-centered communication (PCC) as a clinical-specific competency and social entrepreneurship (SE) motivation as a goal-oriented behavioral driver. This approach ensures that the analysis captures domain-specific, proximal predictors of entrepreneurial intentions rather than generic psychological variables, thereby offering a more nuanced model that reflects the unique professional realities of the nursing students.

The current literature has explored clinical communication and entrepreneurship in isolation. Recent literature has documented PCC as a vital clinical competency and ethical pillar in nursing, with its primary impact on clinical readiness and patient satisfaction (Kim, 2022; Sim, Park and Kim, 2023; Almughlliq *et al.*, 2024; Bardhia *et al.*, 2025). In contrast, research on the SEI has predominantly focused on psychological traits such as general empathy, moral obligation, and entrepreneurship education within business student populations (Cheah, Loh and Gunasekaran, 2023; Gazi *et al.*, 2024; Ukil, Almashayekhi and Ullah, 2024). Despite these advancements, a clear empirical gap remains regarding the structural mechanism that bridges clinical PCC skills with social entrepreneurship motivation and specific homecare career intentions in nursing education.

This study addresses this gap by investigating the direct and mediated pathways through which patient-centered communication and social entrepreneurship motivation influence nursing students' entrepreneurial

intentions to pursue homecare nursing. The findings are expected to provide practical insights for nursing educators, career guidance practitioners, and policymakers seeking to diversify the nursing workforce and strengthen community-based care capacities in Indonesia and comparable settings.

Materials and Methods

Research Design

This study used a cross-sectional quantitative survey design to examine the structural relationships between patient-centered communication, social entrepreneurship motivation, and entrepreneurial intentions among nursing students. This study adopted a causal-predictive approach, which tests hypothesized theoretical paths and aims to maximize the explained variance of the target constructs. This dual focus supported the use of Partial Least Squares Structural Equation Modeling (PLS-SEM), as it is appropriate for studies that aim to provide theoretical insights and predictive relevance (Hair *et al.*, 2019; Shmueli *et al.*, 2019). A cross-sectional design is appropriate for investigating associations between psychological constructs at a single point in time and has been widely applied in studies examining career intentions in health professions education (Creswell and Creswell, 2017; Abutabenjeh and Jaradat, 2018; Flanagan and Beck, 2024).

Setting and Participants

The study was conducted at a College of Health Sciences (*Sekolah Tinggi Ilmu Kesehatan*) in West Sumatra, Indonesia. The target population comprised undergraduate nursing students and *ners* (professional nurse) program students who had completed structured coursework in homecare nursing. The homecare nursing curriculum covered the theoretical foundations of homecare, contemporary trends and legal frameworks, organizational management of homecare services, interprofessional collaboration models, evidence-based care interventions, documentation standards, palliative care principles, and the role of homecare within community health systems.

A total of 208 nursing students were recruited using purposive (non-probability) sampling. This non-probability approach was used because probability sampling was not feasible owing to the absence of a centralized, accessible institutional sampling frame that tracked individual academic progress and real-time module completions. Furthermore, a purposive strategy was theoretically necessary to ensure that all participants had the baseline clinical and theoretical exposure required to test the hypothesized structural model**.** The inclusion criteria required participants to have (1) completed the homecare nursing module, (2) currently enrolled in the sixth or eighth semester or *Ners* professional program, and (3) provided informed consent. Students who had not yet completed the homecare coursework or declined to participate were excluded.

The sample size of 208 participants was considered sufficient based on the complexity of the structural model. Following the recommendations of Hair et al. (2021), the model involved 28 estimated parameters (consisting of 25 indicator loadings and three structural path coefficients). While this yields a ratio of 7.4 observations per parameter, this sample size exceeded the minimum requirement according to the '10-times rule', which focuses on the maximum number of structural paths pointing at a particular construct (in this model, two paths point to EI, requiring a minimum of 20 observations). Furthermore, based on the inverse square root method for a significance level of 5% and a power of 80%, a sample of 208 was adequate to detect path coefficients as low as 0.18 (Hair et al., 2021).

Instruments

Three validated instruments were used in this study: The instruments were adapted from international measurement tools that had undergone language and cultural adaptation in the Indonesian context. The adaptation followed a forward-back translation procedure. First, two independent bilingual language experts translated the original English instruments into Indonesian (forward translation). Minor linguistic discrepancies between the two forward translations were reconciled by a third researcher. Next, two independent translators, who were blinded to the original English versions, back-translated the Indonesian draft into English. Discrepancies between the back-translated versions and the original instruments were resolved through a consensus committee meeting comprising the authors and language specialists to ensure semantic and conceptual equivalence of the items. Content validity was assessed by experts in nursing and entrepreneurship to ensure clarity of meaning and the suitability of the measurement context for university students. Additionally, a pilot test was conducted with a small group of students to confirm that the items were easily understood and adapted to the homecare nursing context.

Entrepreneurial Intentions (EI): Students' Intentions to pursue homecare nursing as an entrepreneurial career were measured using the Entrepreneurial Intention Questionnaire (EIQ), originally developed by Liñán and Chen (2009) based on Ajzen's Theory of Planned Behavior (Ajzen, 1991). The EIQ comprises ten items (EI1–EI10) rated on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). A representative item is 'If I have the opportunity and resources, I would like to start a homecare business.' The instrument

demonstrated strong reliability in this study (Cronbach's α = 0.90).

Patient-Centered Communication (PCC): Communication competencies were assessed using the Patient-Centered Communication Scale, derived from the theoretical framework proposed by Epstein and Street (2007) and psychometrically validated by Moser et al. (2022). The scale consists of six items (PCC1–PCC6) and uses a five-point Likert response format. A sample item was 'I involve patients in decision-making about their healthcare as much as desired.' Reliability was confirmed with a Cronbach's α of 0.92.

Social Entrepreneurship (SE): Social entrepreneurship motivation was evaluated using the Social Entrepreneurship Drive Scale developed by (Carraher, Welsh and Svilokos, 2016), comprising nine items (SE1–SE9) on a five-point Likert scale. A representative item is, 'I am involved in a process of continuous adaptation related to social work.' The scale showed excellent reliability (Cronbach's α = 0.94).

Data Analysis

Data were analyzed using partial least squares structural equation modelling (PLS-SEM) with SmartPLS 3.0 software (Henseler, Ringle and Sarstedt, 2015). PLS-SEM is appropriate for theory development, complex models with multiple latent constructs, and smaller sample sizes (Hair *et al.*, 2021).

To ensure the model's suitability before conducting outer and inner model analyses, an initial fit evaluation was performed. The robustness of the model was determined using various feasibility indicators, specifically the Standardized Root Mean Square Residual (SRMR) and Normed Fit Index (NFI). The global model fit was assessed using SRMR. The results yielded an SRMR value of 0.066, which is well below the conservative threshold of 0.08, confirming a good fit between the model and the empirical data (Henseler, Ringle and Sarstedt, 2015). Additionally, the NFI reached 0.802, providing further evidence of an acceptable model fit within the context of the PLS-SEM analysis.

The measurement model was assessed for reliability and validity. Indicator reliability was confirmed by outer loading values exceeding 0.70 (Hair *et al.*, 2021). Internal consistency was evaluated with Cronbach's alpha and composite reliability (CR), with acceptable thresholds of 0.70 or above (Al-Marsomi and Al-Zwainy, 2023). Convergent validity was established through Average Variance Extracted (AVE) values exceeding 0.50 (Shrestha, 2021). Discriminant validity was assessed with the Fornell-Larcker criterion, which requires the square root of AVE to exceed inter-construct correlations (Fornell and Larcker, 2012), and the Heterotrait-Monotrait (HTMT) ratio of correlations, with values below 0.90 indicating satisfactory discriminant validity. (Henseler, Ringle and Sarstedt, 2015; Rönkkö and Cho, 2022).

The structural model was evaluated using bootstrapping with 5,000 subsamples to assess the path coefficients, T-statistics, and p-values. Hypotheses were supported when the T-statistics exceeded 1.96 and p-values were below 0.05 (Komaroff, 2020). Mediation analysis was conducted to examine the indirect pathway between patient-centered communication and entrepreneurial intentions through social entrepreneurship.

Ethical Considerations

This study was conducted in accordance with the ethical principles of the Declaration of Helsinki. The research protocol was formally reviewed and approved by the Health Research Ethics Committee of Universitas Alifah Padang (*Komite Etik Penelitian Universitas Alifah Padang*) under the institutional clearance number 001723/KEP Universitas Alifah Padang/2026. Written informed consent was obtained from all participants prior to data collection. The confidentiality and anonymity of the participants' data were maintained throughout the study.

Results

Respondent Characteristics

A total of 208 nursing students participated in this study. Most respondents were female (n = 187, 89.9%), and male participants comprised 10.1% (n = 21). In terms of academic progression, 156 respondents (75.0%) were enrolled in the sixth semester, 25 (12.0%) in the eighth semester, and 27 (13.0%) in the *ners* professional program. All participants had completed coursework in homecare nursing before their enrolment. The demographic characteristics are summarized in Table 1.

Measurement Model

A full collinearity assessment was performed to detect potential Common Method Bias (CMB). The inner VIF analysis showed that all values remained below the 3.3 threshold (Kock and Mayfield, 2015), suggesting that the data were not substantially affected by common method bias and confirming the validity of the structural relationships between the latent variables. The results of the convergent validity assessment are shown in Table 2. All outer loading values exceeded the recommended threshold of 0.70, ranging from 0.701 to 0.865 for EI, 0.784 to 0.857 for PCC, and 0.741 to 0.842 for SE. Cronbach's alpha values ranged from 0.903 to 0.938, and composite reliability (CR) values ranged from 0.924 to 0.945, both of which exceeded the minimum criterion of 0.70. AVE values exceeded 0.50 for all constructs (EI = 0.634; PCC = 0.671; SE = 0.633), confirming convergent validity (Hair *et al.*, 2021; Shrestha, 2021).

Table 1. Respondent Characteristics

Characteristics	Category	Frequency (n)	Percentage (%)
Gender	Male	21	10.1
	Female	187	89.9
	Total	**208**	**100**
Study Level	6th Semester	156	75.0
	8th Semester	25	12.0
	Nursing Profession (Ners)	27	13.0
	Total	**208**	**100.0**

Table 2. Inner VIF,Outer Loading, Cronbach's Alpha, Composite Reliability, and AVE

Variable	Item	Inner VIF	Outer Loading	Cronbach's Alpha	CR	AVE
Entrepreneurial Intentions (EI)	EI1	1.573	0.758	0.938	0.945	0.634
	EI2		0.701			
	EI3		0.763			
	EI4		0.705			
	EI5		0.811			
	EI6		0.827			
	EI7		0.865			
	EI8		0.861			
	EI9		0.834			
	EI10		0.816			
Patient-Centered Communication (PCC)	PCC1	1.573	0.818	0.903	0.924	0.671
	PCC2		0.784			
	PCC3		0.857			
	PCC4		0.845			
	PCC5		0.792			
	PCC6		0.817			
Social Entrepreneurship (SE)	SE1	1.000	0.796	0.929	0.939	0.633
	SE2		0.748			
	SE3		0.842			
	SE4		0.817			
	SE5		0.777			
	SE6		0.813			
	SE7		0.802			
	SE8		0.819			
	SE9		0.741			

Discriminant validity was assessed using the Fornell-Larcker criterion and the HTMT ratio (Table 3). In the Fornell-Larcker analysis, the square root of the AVE for each construct (EI = 0.796; PCC = 0.819; SE = 0.796) exceeded all inter-construct correlation coefficients, confirming that each construct captured more variance from its indicators than from those of other constructs. HTMT values ranged from 0.358 to 0.658, all substantially below the conservative threshold of 0.90 (Henseler, Ringle and Sarstedt, 2015), confirming satisfactory discriminant validity across all construct pairs.

Structural Model and Hypothesis Testing

The results of the structural model analysis, including direct and indirect hypothesis testing, are shown in Table 4. Of the four hypotheses, three were statistically supported, with T-statistic values exceeding 1.96 and p-values below 0.001 (Komaroff, 2020).

Hypothesis 1 (H1), which posited a positive direct relationship between PCC and EI, was not supported (β =

Table 3. Fornell-Larcker Criteria & HTMT Ratio of Correlations

Formell-Larcker Crieteria			
Variables	**EI**	**PCC**	**SE**
EI	**0.796**		
PCC	0.329	**0.819**	
SE	0.597	0.604	**0.796**

HTMT Ratio of Correlations			
Variables	**EI**	**PCC**	**SE**
EI			
PCC	0.358		
SE	0.637	0.658	

Table 4. Direct and Indirect Path Coefficients (Hypothesis Testing) & Model Quality

Hypothesis	β	T-Statistic	P-Value	f^2	Results
H1: Patient-Centered Communication → Entrepreneurial Intentions (Direct)	-0.050	0.428	0.669	0.002	Not-Supported
H2: Patient-Centered Communication→Social Entrepreneurship (Direct)	0.604	11.851	0.000	0.573	Supported
H3: Social Entrepreneurship→Entrepreneurial Intentions (Direct)	0.627	5.203	0.000	0.390	Supported
H4: Patient-Centered Communication → Social Entrepreneurship → Entrepreneurial Intentions (Indirect)	0.379	4.030	0.000	-	Supported

Endogenous Construct	R2	R2 Adjusted	Q2
Social Entrepreneurship (SE)	0.364	0.361	0.226
Entrepreneurial Intentions (EI)	0.358	0.352	0.221

-0.050, T = 0.428, p = 0.669). This indicates that communication competency did not directly trigger entrepreneurial intentions in the absence of a mediating factor. In contrast, Hypothesis 2 (H2) was strongly supported (β = 0.604, T = 11.851, p < 0.001), demonstrating that PCC is a powerful predictor of Social Entrepreneurship motivation. Similarly, Hypothesis 3 (H3), the path from social entrepreneurship to entrepreneurial intentions, was the strongest direct effect in the model (β = 0.627, T = 5.203, p < 0.001).

In the mediation analysis, Hypothesis 4 (H4) predicted that SE motivation would mediate the relationship between PCC and EI. Based on the bootstrapping results, the indirect effect was significant (β = 0.379, p < 0.001). Following contemporary PLS-SEM guidelines (Hair et al., 2021), the mediation type was evaluated by assessing the significance of both the direct and indirect paths. Given that the direct effect of PCC on EI was non-significant (β = -0.050, p = 0.669), while the indirect effect was highly significant, SE motivation fully mediated the relationship (indirect-only mediation). Thus, H4 is fully supported.

Following the mediation classification criteria (Hair *et al.*, 2021), since the VAF exceeded 80% and the direct effect (PCC → EI) was non-significant (β = -0.050, p = 0.669), this model exhibited Full Mediation (Indirect-only Mediation). This indicates that social entrepreneurship is the essential mechanism that fully explains how communication competencies translate into entrepreneurial intentions, as no significant direct relationship exists without the presence of social entrepreneurship motivation.

As required by contemporary PLS-SEM reporting standards, the structural model quality was assessed using R-squared (R^2) and Stone-Geisser's Q^2. As shown in Table 4, the R^2 values for both endogenous constructs (0.364 and 0.358) indicate a moderate explanatory power. Furthermore, all Q^2 values are greater than zero, confirming that the model possesses sufficient predictive relevance (Hair *et al.*, 2019, 2021).

Discussions

This study provides empirical evidence that PCC and SE motivation are critical determinants of nursing students' entrepreneurial intentions, albeit through a full mediation mechanism. The structural model demonstrated moderate explanatory power, accounting for 35.8% of the variance (R^2 = 0.358) in entrepreneurial intentions, indicating that these factors have practical relevance in shaping career aspirations. Notably, social entrepreneurship fully mediated the relationship between communication competencies and entrepreneurial aspirations.

These findings suggest that clinical communication skills do not directly translate into business intentions; instead, they are insufficient in isolation to stimulate entrepreneurial action until they are channeled through a social mission orientation. This shift in understanding, from a direct to a fully mediated pathway, adds to the evidence on the psychological and educational determinants of homecare career choice in the Indonesian context. This underscores that for healthcare professionals, the transition to entrepreneurship is not driven by technical proficiency alone but by a transformative process of identity reconciliation in which clinical empathy is repurposed for social value creation.

In contrast to some prior studies, the direct relationship between patient-centered communication and entrepreneurial intentions was not statistically significant (H1: β = -0.050, p = 0.669). Beyond the lack of statistical significance, the effect size was practically negligible (f^2 = 0.002), suggesting that PCC, in isolation, has no meaningful impact on business intentions. This finding also highlights the fundamental gap between clinical competence and entrepreneurial aspirations within the nursing profession. Although PCC is a cornerstone of nursing competence, these skills do not automatically translate into entrepreneurial intentions because of a deep-seated identity conflict between nursing professional and entrepreneurial identities.

Theoretically, nursing professional identity is a powerful, deeply socialized construct developed during formal education and clinical socialization that prioritizes altruism, patient advocacy, and service (Wu, zhou and ying, 2024; Shankar *et al.*, 2025). This socialization fosters a "caring imperative" where nurses perceive their work as a vocation rather than a commercial endeavor (Jakobsen *et al.*, 2021). Consequently, advanced interpersonal skills such as PCC reinforce the identity standard of a "caregiver," which is often perceived as intrinsically incompatible with the commercial logic of entrepreneurship, such as risk-taking and profit-seeking (Gong *et al.*, 2025). In this context, the more a student internalizes the values of patient-centered care, the more they may perceive a dichotomy between "real nursing" and business activities in healthcare.

This non-significant result is further explained by Role Identity Theory, which posits that tension between two identities occurs because maintaining one identity requires the interruption of the other (Nielsen and Gish, 2023). For nursing students, activating an entrepreneurial identity while simultaneously developing a clinical identity creates cyclical interruptions. As Raible and Middleton (2021) argue, a salient and deeply internalized identity can actively inhibit the activation and enactment of emergent conflicting identities. In this study, mastery of PCC may reinforce students' commitment to traditional clinical values, thereby creating a barrier to the development of an entrepreneurial self-concept. Furthermore, the results

underscore that clinical skills, while necessary for nurse entrepreneurship, are fundamentally insufficient for generating business intentions (Jakobsen *et al.*, 2021; Radwan and Khalil, 2023) which is consistent with the argument by Stenholm *et al.* (2024) that the fusion of professional identity with business skills often fails to impact economic outcomes unless accompanied by a significant identity shift. Therefore, clinical communication competencies may remain "commercially inert" within the nursing professional framework unless they are channeled through a mediating mechanism, such as Social Entrepreneurship, that can reconcile the perceived conflict between care and commerce.

The strong association between patient-centered communication and social entrepreneurship (H2: β = 0.604) showed a large effect size (f^2 = 0.573) is a theoretically coherent finding, given that both constructs are rooted in other-oriented motivations and relational engagement. Social entrepreneurship has been conceptualized as the application of entrepreneurial principles to address social needs, and individuals with high social entrepreneurial orientation are distinguished by their responsiveness to community problems and their commitment to generating social value (Carraher, Welsh and Svilokos, 2016). Nursing students who demonstrate strong patient-centered communication skills may simultaneously hold stronger social value orientations, as both constructs reflect a disposition toward empathic, collaborative engagement with vulnerable populations. Abdel-Fattah et al. (2022) reported that homecare nurses who reported high levels of patient-family communication satisfaction also expressed stronger motivation to sustain and expand their community-based services. Dai et al. (2021) similarly found that nursing students willing to work in geriatric care were characterized by altruistic and social engagement motivations, paralleling the social entrepreneurship orientation observed in the present study.

The direct effect of social entrepreneurship on entrepreneurial intentions (H3: β = 0.627) also demonstrated a large effect size (f^2 = 0.390), representing the strongest path coefficient in the structural model, underscoring the primacy of social value motivation in driving students' aspirations toward homecare careers. This is consistent with theoretical frameworks positing that entrepreneurial intention in social ventures is primarily driven by social, rather than economic, motivations (Turker and Selcuk, 2009). In the nursing context, homecare entrepreneurship carries an inherent social mission, providing dignified, patient-centered care to elderly and vulnerable individuals in their preferred environment, which resonates strongly with students who hold social entrepreneurship values. Kim and Lim (2022) and Yang *et al.* (2025) identified social commitment as one of the strongest predictors of entrepreneurial intention among nursing students.

The significant mediation of social entrepreneurship in the patient-centered communication entrepreneurial intention pathway (H4: β = 0.379, $p < 0.001$) is a novel finding with important theoretical and practical implications. This suggests that patient-centered communication does not directly influence homecare career intentions; instead, it operates exclusively by fostering social entrepreneurship motivation.

Empirical support for this mechanism is demonstrated by the non-significant direct effect alongside a highly significant indirect effect, which indicates full mediation (indirect-only mediation) (Hair et al., 2021). Students who develop strong communication skills may cultivate stronger social awareness and a commitment to community-based care through their empathic interactions with patients and families. This mediated pathway aligns with Watson et al. 's (2020) findings, suggesting that clinical exposure enhances professional commitment.

However, unlike previous assumptions of partial mediation, the full mediation observed here underscores that clinical-empathy competencies may be "entrepreneurially inert" in isolation. They require the activation of a social entrepreneurship orientation to resolve the inherent conflict between nursing's "caring imperative" and the "commercial logic" of business ventures. In other words, Social Entrepreneurship serves as an essential psychological bridge that transforms clinical soft skills into a concrete intention to pursue independent practice.

These findings have practical implications for nursing education reform, particularly in aligning Indonesian nursing curriculum standards with the growing demands of demographic aging. Since social entrepreneurship motivation functioned as a full mediator, the Association of Indonesian Nurse Education Institutions (AIPNI) should encourage member institutions to move from fragmented soft-skills training to an integrated pedagogical approach within the national competency framework. Specifically, nursepreneurship courses should incorporate simulation-based or experiential learning that replicates homecare patient-family interactions. Rather than treating independent practice as a purely commercial endeavor, this pedagogical shift should bridge clinical empathy and social-business models. This educational strategy provides a pathway for students to reconcile their professional nursing identity, thereby transforming latent communication skills into concrete intentions to fulfill community-based elderly care.

This study has several limitations. First, the cross-sectional design and focus on entrepreneurial intentions rather than actual outcomes precluded causal inference, leaving an "intention-behaviour gap" that this study does

not address. Second, the use of purposive sampling, specifically selecting students who had completed the homecare course, may have introduced a selection bias. Third, the sample was drawn from a single institution in West Sumatra, with a significant gender imbalance (89.9% female). Fourth, although full collinearity VIF diagnostics indicated that common method bias (CMB) was not a significant concern, the procedural reliance on self-reported data remains a limitation. Finally, the structural model did not include control variables, such as age or prior clinical experience, which could influence the strength of the observed pathways.

To address these limitations, future research should employ multi-site sampling and consider including practising homecare nurses to examine whether the same predictors are associated with career persistence and satisfaction. Additionally, although the instruments demonstrated strong psychometric properties, the use of self-reported data introduced social desirability bias. Objective measures of communication competency, such as Objective Structured Clinical Examinations (OSCEs), could strengthen future studies. Furthermore, longitudinal designs and the inclusion of control variables are recommended to track the transition from intention to actual career entry and to ensure the robustness of the findings.

Conclusion

This study advances the healthcare entrepreneurship literature by demonstrating that the transition from clinical competence to entrepreneurial intention is not a direct linear path but a process of identity and motivational reconciliation. While the results confirm that PCC and SE are vital factors, the identified full mediation mechanism reveals a significant theoretical boundary: clinical competencies are "entrepreneurially inert" in themselves. This study indicates that in the nursing context, the inherent conflict between the "caring imperative" and "commercial logic" prevents PCC from directly triggering business intentions.

Theoretically, this research contributes to Role Identity Theory by establishing Social Entrepreneurship as the psychological bridge that transforms altruistic professional values into sustainable career aspirations. This suggests that for healthcare professionals, entrepreneurial intent is not driven by traditional economic motives but by a social mission orientation that justifies independent practice as an extension of patient care.

These findings provide a framework for nursing education reform in Indonesia. To operationalize this, it is recommended that the Association of Indonesian Nurse Education Institutions (AIPNI) integrate social-business models into clinical curricula through Project-Based Learning (PjBL) and the Social Business Model Canvas (SBMC). This approach ensures that nursing students not only possess clinical empathy but also the structural capacity to translate it into social ventures. Future research should employ longitudinal designs to examine how identity reconciliation evolves as students transition into professional practice.

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Declaration on the use of generative Artificial Intelligence (AI)

The authors confirm that generative artificial intelligence tools were not used for data analysis, interpretation, or the creation of scientific content in this manuscript. The authors take full responsibility for the originality, accuracy, and integrity of all aspects of this study.

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Availability of data and materials

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Authors' contributions

Larasuci Arini: Conceptualization, original manuscript drafting, and data collection. Afdal: Study design, methodology and conceptualization. Ifdil: Visualization and supervision. Zadrian Ardi: Formal data analysis and statistical modelling. Mega Iswari: Conceptualization and critical manuscript review. Nurfarhanah: Ethical considerations, manuscript revision, and review. All authors have reviewed and approved the final manuscript.

Declaration of Interest

The authors declare no conflicts of interest relevant to the content of this manuscript. No financial or personal relationships could have inappropriately influenced or biased the findings reported herein.

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