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PERCEPTIONS OF COMMUNITY HEALTH NURSES IN TIMOR-LESTE REGARDING WORK ORGANIZATION AND THE NEED FOR IMPROVEMENT: A CROSS-SECTIONAL STUDY

PERCEÇÕES DE ENFERMEIROS DE SAÚDE COMUNITÁRIA EM TIMOR-LESTE SOBRE ORGANIZAÇÃO DO TRABALHO E NECESSIDADES DE MELHORIA: UM ESTUDO TRANSVERSAL

PERCEPCIONES DE LOS ENFERMEROS DE SALUD COMUNITARIA EN TIMOR-LESTE SOBRE LA ORGANIZACIÓN DEL TRABAJO Y LA NECESIDAD DE MEJORA: UN ESTUDIO TRANSVERSAL

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ABSTRACT

Introduction: in Timor-Leste, community nurses play a central role in health promotion and disease prevention. Work organization conditions may influence the implementation of perceived quality of care. Objectives: to describe and compare community nurses' perceptions regarding (i) the nature of their work, (ii) facilitating conditions, (iii) areas for improvement, and (iv) weaknesses, according to sociodemographic and professional characteristics. Methodology: descriptive cross-sectional study (n = 157) with non-probability sampling. Bilingual questionnaire (Portuguese/Tetum) with Likert-scale items (1-5) and open-ended questions. Descriptive analysis and nonparametric tests (Mann-Whitney, Kruskal-Wallis) using SPSS. Ethical approval (Ref.: 01/INSP-TL/UEPD/1/2024.) Conclusion: participants identified the improvement of human and material resources and the strengthening of continuing education as priorities, as well as work organization and community involvement. The results should be interpreted considering the non-probability sampling.

Keywords: Community Nursing. Primary Health Care. Work Organization. Continuing Professional Development. Timor-Leste.

RESUMO

Introdução: em Timor-Leste, os enfermeiros comunitários têm um papel central na promoção de saúde e prevenção das doenças. As condições de organização do trabalho podem condicionar a implementação de perceção de qualidade dos cuidados. Objetivos: descrever e comparar a perceção dos enfermeiros comunitária sobre, (i) natureza do trabalho, (ii) condições facilitadoras, (iii) necessidades de melhoria e (iv) debilidades, segundo

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características sociodemográficas/profissionais. Metodologia: estudo transversal descritiva (n = 157), com amostragem não probabilística. Questionário bilingue (português/tetum) com itens Likert (1-5) e perguntas abertas. Análise descritiva e teste não paramétricos (Mann-Whitney, Kruskal-Wallis), no SPSS. Aprovação ética (Ref.: 01/INSP-TL/UEPD/1/2024.) Conclusão: os participantes apontam como prioritárias a melhoria de recursos humanos/materiais e o reforço da formação continua, bem como a organização do trabalho e o envolvimento comunitário. Os resultados devem ser interpretados considerando a amostragem não probabilística.

Palavras-chave: Enfermagem Comunitária. Cuidados de Saúde Primários. Organização do Trabalho. Desenvolvimento Profissional Continuo. Timor-Leste.

RESUMEN
Introducción: En Timor-Leste, los enfermeros comunitarios desempeñan un papel esencial en la promoción de la salud y la prevención de enfermedades. No obstante, las condiciones de organización del trabajo pueden influir en la percepción de la calidad de los cuidados prestados. Objetivos: Describir y comparar la percepción de los enfermeros comunitarios sobre: (i) la naturaleza del trabajo, (ii) las condiciones facilitadoras, (iii) las necesidades de mejora y (iv) las debilidades, en función de las características sociodemográficas y profesionales. Metodología: Se realizó un estudio descriptivo de corte transversal con una muestra de 157 enfermeros, seleccionados mediante un muestreo no probabilístico. Se utilizó un cuestionario bilingüe (portugués/tetun), integrado por ítems tipo Likert (1–5) y preguntas abiertas. Los datos se analizaron mediante estadística descriptiva y pruebas no paramétricas (Mann-Whitney y Kruskal-Wallis) utilizando el programa SPSS. El estudio fue aprobado por el comité de ética (Ref.: 01/INSP-TL/UEPD/1/2024). Conclusiones: Los participantes señalaron como principales prioridades la mejora de los recursos humanos y materiales, el fortalecimiento de la formación continua, la optimización de la organización del trabajo y una mayor participación de la comunidad. Los resultados deben interpretarse teniendo en cuenta las limitaciones inherentes al muestreo no probabilístico.

Palabras clave: Enfermería Comunitaria. Atención Primaria de Salud. Organización del Trabajo. Desarrollo Profesional Continuo. Timor-Leste.

1 INTRODUCTION

Community nursing has specific characteristics that distinguish it from other areas of nursing, due to its direct involvement in people's living environments, which allows for a deeper understanding of the population's health needs (Silva *et al.*, 2023). This practice is grounded in theories such as that of Hildegard Peplau, which emphasizes the importance of interpersonal relationships in the care process (Peplau, H. E. 1991), and Madeleine Leininger's Transcultural Theory, which highlights the need to consider cultural differences in the provision of health care (Leininger, M. 2002).

Community nurses play a crucial role in promoting public health, preventing disease, and providing primary care (Rodrigues & Pereira, 2023). Their work is distinct from other nursing specialists due to their proximity to the community that allows nurses to understand people not only as patients, but also as members of different social contexts, in this study, these dimensions are operationalized into the following categories: facilitating conditions, nature of work, areas for improvement, and weaknesses. This specificity is based on theoretical models that emphasize interpersonal relationships and care centered on the individual and the community (Mendes & Costa, 2022).

As an international example of home care organization, the Buurtzorg model, originating in the Netherlands, exemplifies the practical application of these theories; however, its transferability to Timor-Leste would require contextual adaptation. This model uses self-managed teams of nurses who provide integrated home care, enabling a more effective and personalized response to patients' needs (Zhang *et al.*, 2024). The Buurtzorg approach has been internationally recognized for its efficiency and for the satisfaction of both professionals and patients (Pereira & Santos, 2023).

Despite the importance of community nursing, there is little systematic evidence regarding the perceptions of nurses in Timor-Leste regarding working conditions and the need for improvement through a patient-centered approach that takes into account the social, cultural, and economic context in which patients are embedded. This specificity requires the application of contemporary theories that emphasize the importance of integrated care practices adapted to individual and collective needs. For example, the Person-Centered Care Theory highlights the need to personalize healthcare, promoting patients' autonomy and active involvement in their healthcare process (Gomes *et al.*, 2023).

In Timor-Leste, the practice of nursing is governed by Decree-Law Nº. 14/2004 of 1 September, as amended by Decree-Law Nº. 40/2011, which defines requirements for

practice, registration, and professional duties. The community is an essential component in ensuring the quality, safety, and efficiency of the care provided to the population. In many countries, including Timor-Leste, the role of community nurses is regulated by laws aimed at ensuring their practice adheres to ethical and professional standards, as well as safeguarding patients' rights.

These nurses, who work primarily in primary health care, perform essential functions such as health promotion, disease prevention, monitoring of chronic conditions, and palliative care. The specific legislation governing their practice is generally guided by principles such as autonomy, responsibility, and competence.

In Timor-Leste, legislation related to nursing practice aligns with the principles established by the World Health Organization (WHO), promoting community health and ensuring that professionals follow evidence-based care practices in accordance with national health guidelines. In addition, there are regulations regarding registration and continuing education, ensuring that community nurses remain up to date on best care practices and respond appropriately to the needs of the population.

Objectives: (1) To describe community nurses' perceptions of the dimensions of their work; (2) To identify priorities for improvement and weaknesses; (3) To compare the dimensions by sex, age, education, length of service, and academic degree.

2 METHODOLOGY

A descriptive exploratory cross-sectional study of a qualitative nature was conducted to characterize perceptions regarding community nursing work, the challenges and opportunities of community nursing in the country, and to contribute to the development of strategies that strengthen the performance of these professionals and improve the health services provided to the population. To this end, we examined sociodemographic variables, conditions that facilitate high-quality work, the nature of the work, areas for improvement, training to ensure quality and safety in care, weaknesses in the work, and strategies in the work process.

The sample was calculated to include 207 nurses from a population of 1,276; however, we could only effectively consider the final sample, which included 157 nurses recruited through non-probability sampling. This approach may introduce selection bias and limits generalizability. Data collection was designed to maximize participation and covering the municipalities of Dili, Baucau, Manatuto, Aileu, Liquisa, and Bobonaro. The study took place

from [January 10, 2024] to [September 20, 2024], conducted in person or remotely, depending on the criteria, and data collection was carried out using a self- administered paper questionnaire. To ensure a representative sample, a schedule of visits to the nurses' workplaces was developed, during which the questionnaires were distributed to the selected participants. The nurses were able to complete the questionnaires at their workplace, with data collection taking place on the same day.

Data collection was planned with the researcher present to ensure representativeness and participant compliance. Initial contact was made with community health institutions to obtain authorization and provide clarification regarding the research objectives. The questionnaire was administered in person or remotely, depending on participants' availability and the specific conditions of each institution. Additionally, a specific timeframe was established for data collection, with continuous follow-up to ensure the desired response rate.

The sample included 61.1% women (n=96) and 38.9% men (n=61). The data collection instrument was a questionnaire developed based on a review of the literature on community nursing, work organization, and primary health care, incorporating contributions from the WHO and previous studies in similar contexts. Content validity was ensured through expert review.

The self-administered questionnaire consisted of four parts: the first three contained closed-ended questions organized to quantify each variable, and the last part consisted of open-ended questions. The closed-ended questions associated with the variables used a Likert scale with five response options: “Not important” (1), “Somewhat important” (2), “Important” (3), “Very important” (4), and “Essential” (5). The questionnaire was distributed in Portuguese and Tetum (the Timorese language) to facilitate understanding of the questions.

Data analysis was performed using SPSS software, employing descriptive statistics to characterize the sample and assess the distribution of the variables. For comparisons between groups based on sociodemographic characteristics, nonparametric tests were applied: the Mann-Whitney U test for two categories (e.g., sex) and the Kruskal-Wallis test for three or more categories (e.g., age, length of service). In these tests, the null hypothesis (H_0) assumes that there are no differences between the groups, and is rejected if $p < 0.05$, indicating the existence of statistically significant differences between at least two groups.

Informed consent was obtained and stored in (location/conditions). The study was approved by the Ethics Committee of Timor-Leste, with reference Ref.: 01/INSP-

TL/UEPD/1/2024. Participation by the nurses was voluntary, ensuring the anonymity and confidentiality of the information provided.

3 RESULTS

The results present (i) sample characteristics; (ii) distribution of responses; (iii) comparisons between sociodemographic groups. The sample includes 61.1% women (n=96) and 38.9% men (n=61). These data reflect the predominance of women in the community nursing profession in Timor-Leste, which is a common phenomenon in many parts of the world, where nursing is predominantly a profession practiced by women.

Regarding age distribution, most nurses are young, with 63.1% (99 nurses) under the age of 29. This is followed by the 30–39 age group, which accounts for 20.4% (32 nurses), and the 40–49 age group, with 12.7% (20 nurses). The participation of older nurses is lower, with only 3.2% (5 nurses) in the 50–59 age group, and 0.6% (1 nurse) aged 60 or older. These data suggest a predominance of young nurses in the field, which may indicate both a renewal of the workforce and potential challenges in retaining more experienced nurses.

The distribution of nurses by years of service reveals that most participants have less than five years of experience (68.8%; 108 nurses). Only 19.7% (31 nurses) have between 6 and 15 years of service, and 7.0% (11 nurses) have between 16 and 25 years of experience. This distribution may reflect a relatively new workforce and/or challenges in retaining experienced professionals. The participation of nurses with more than 25 years of experience is very low, with 3.8% (6 nurses) having between 26 and 35 years of experience and only 0.6% (1 nurse) having more than 36 years of service. This suggests that community nursing in Timor-Leste faces challenges related to high turnover and the retention of more experienced professionals.

Regarding the nurses' educational level, it is observed that the majority have a college degree. Of the 157 participants, 48.4% (76 nurses) hold a Bachelor's degree, while 45.9% (72 nurses) hold an Associate's degree. Only 5.7% (9 nurses) have training at the SPK (Vocational Technician) level. These data indicate that the majority of community nurses in Timor-Leste have higher education qualifications, which can contribute to higher-quality and more skilled nursing practice. However, the presence of nurses with technical training suggests a diversity in skill levels within the profession.

An analysis of continuing education over the past year reveals a growing trend toward seeking professional education and training. Most nurses participated in recent training

courses, with 28.0% (44 nurses) having attended programs in 2022 and 27.4% (43 nurses) in 2023. Other years with a significant number of participants were 2017 (6.4%; 10 nurses), 2020 (6.4%; 10 nurses), and 2021 (5.7%; 9 nurses).

In contrast, participation in training programs from previous years is much lower, with only 0.6% (1 nurse) reporting participation in 1990, 1994, or 1998. These data suggest that continuing education has intensified in recent years, which is crucial for improving nursing practice, especially in a context of constantly changing public health needs.

Table 1

Distribution of community nurses' opinions on key areas of professional practice

Variables	Dimensions	Not important (n, %)	Slightly important (n, %)	Important (n, %)	Very important (n, %)	Essential (n, %)
Facilitating conditions for quality work	Nurses' knowledge is fundamental to ensuring the quality of care	1 (0.6%)	4 (2.5%)	45 (28.7%)	50 (31.8%)	57 (36.3%)
	The existence of practice standards is fundamental to ensuring the quality of care	1 (0.6%)	1 (0.6%)	65 (41.4%)	55 (35.0%)	35 (22.3%)
	Recognition of partnerships with other professionals and service managers	2 (1.3%)	8 (5.1%)	56 (35.7%)	59 (37.6%)	32 (20.4%)
	Following institutional and professional guidelines	4 (2.5%)	5 (3.2%)	52 (33.1%)	64 (40.8%)	32 (20.4%)
	Participation in professional associations	1 (0.6%)	19 (12.1%)	64 (40.8%)	48 (30.6%)	25 (15.9%)
	Professional recognition as a health professional	1 (0.6%)	2 (1.3%)	31 (19.7%)	67 (42.7%)	56 (35.7%)
Nature of work	Treatment provision	1 (0.6%)	3 (1.9%)	44 (28.0%)	70 (44.6%)	39 (24.8%)
	Vaccination	3 (1.9%)	1 (0.6%)	41 (26.1%)	68 (43.3%)	44 (28.0%)
	Family health interventions	2 (1.3%)	4 (2.5%)	47 (29.9%)	73 (46.5%)	31 (19.7%)
	Home care / domiciliary visits	1 (0.6%)	15 (9.6%)	49 (31.2%)	64 (40.8%)	28 (17.8%)
	Clinical consultations	3 (1.9%)	3 (1.9%)	41 (26.1%)	70 (44.6%)	40 (25.5%)
	Health promotion and healthy lifestyles activities	4 (2.5%)	3 (1.9%)	44 (28.0%)	65 (41.4%)	41 (26.1%)
	Health promotion activities	3 (1.9%)	7 (4.5%)	44 (28.0%)	60 (38.2%)	43 (27.4%)
Improvement needs	Community capacity building (education and training)	1 (0.6%)	14 (8.9%)	58 (36.9%)	63 (40.1%)	21 (13.4%)

	Community care	–	8 (5.1%)	64 (40.8%)	66 (42.0%)	19 (12.1%)
	Specific consultations	12 (7.6%)	11 (7.0%)	43 (27.4%)	58 (36.9%)	33 (21.0%)
	Community education	3 (1.9%)	11 (7.0%)	58 (36.9%)	59 (37.6%)	26 (16.6%)
	Health education (teaching individuals)	3 (1.9%)	10 (6.4%)	57 (36.3%)	59 (37.6%)	28 (17.8%)
	Treatments	2 (1.3%)	1 (0.6%)	45 (28.7%)	70 (44.6%)	39 (24.8%)
	Health promotion	2 (1.3%)	3 (1.9%)	41 (26.1%)	65 (41.4%)	46 (29.3%)
	Lack of human resources	5 (3.2%)	13 (8.3%)	41 (26.1%)	63 (40.1%)	35 (22.3%)
	Lack of materials	8 (5.1%)	9 (5.7%)	37 (23.6%)	63 (40.1%)	40 (25.5%)
Nursing education for quality and patient safety	Secondary (SPK) Vocational Health Technician	35 (22.3%)	25 (15.9%)	45 (28.7%)	36 (22.9%)	16 (10.2%)
	Bachelor's degree	12 (7.6%)	16 (10.2%)	54 (34.6%)	59 (37.6%)	16 (10.2%)
	Licentiate degree	2 (1.3%)	4 (2.5%)	39 (24.8%)	74 (47.1%)	38 (24.2%)
	Master specialist	2 (1.3%)	8 (5.1%)	39 (24.8%)	59 (37.6%)	49 (31.2%)
	Doctorate	1 (0.6%)	8 (5.1%)	31 (19.7%)	58 (36.9%)	59 (37.6%)
Weaknesses in nursing work	Lack of resources (infrastructure and training)	8 (5.1%)	10 (6.4%)	50 (31.8%)	47 (29.9%)	42 (26.8%)
	Poor organization of care processes	11 (7.0%)	9 (5.7%)	67 (42.7%)	49 (31.2%)	21 (13.4%)
	Low population involvement	12 (7.6%)	13 (8.3%)	67 (42.7%)	49 (31.2%)	16 (10.2%)
	Lack of human resources	7 (4.5%)	14 (8.9%)	38 (24.2%)	63 (40.1%)	35 (22.3%)
	Lack of material resources	8 (5.1%)	8 (5.1%)	46 (29.3%)	60 (38.2%)	35 (22.3%)
	Low investment in health promotion	9 (5.7%)	8 (5.1%)	44 (28.0%)	69 (43.9%)	27 (17.2%)

Note: Data are presented as n (%). Responses were assessed using a five-point Likert scale: 1 = Not important, 2 = Slightly important, 3 = Important, 4 = Very important, and 5 = Essential. Percentages may not total 100% due to rounding.
Source: Prepared by the authors.

The data presented in Table 1 highlight nurses' perceptions of the conditions that facilitate the provision of quality care, the nature of their work, areas for improvement, nursing education, and key weaknesses in professional practice. The analysis focuses on the frequencies and percentages assigned to each dimension, with particular emphasis on the categories "very important" and "essential," as these reflect the highest level of importance attributed by participants.

An analysis of the conditions that facilitate the provision of quality care reveals that participants attributed greater importance, in the "important" category, to the existence of professional standards (41.4%) and participation in professional associations (40.8%). In the "very important" category, the following stand out: adherence to rules and guidelines from superiors and colleagues (40.8%), recognition of partnerships with other professionals and supervisors (37.6%), and recognition as a healthcare professional (42.7%). In turn, regarding

what is considered fundamental, the role of nurses' knowledge in ensuring the quality of care (36.3%) stands out, as well as professional recognition (35.7%).

3.1 NATURE OF NURSES' WORK

With regard to the nature of nurses' work, there is a predominance of responses in the "very important" category, particularly in family health interventions (46.5%), treatment planning (44.6%), conducting consultations (44.6%), vaccination (43.3%), and home care (40.8%). In the "fundamental" category, vaccination (28.0%), health promotion activities (26.1% and 27.4%), and conducting consultations (25.5%) stand out. At the same time, significant figures are observed in the "important" category, particularly in home care (31.2%) and family health interventions (29.9%), reinforcing the centrality of these dimensions in professional practice.

3.2 AREAS FOR IMPROVEMENT

In the area of areas needing improvement, it is evident that nurses attach high importance to aspects related to community care (42.0%), community empowerment (40.1%), insufficient human resources (40.1%), and material shortages (40.1%), predominantly in the "very important" category. Regarding the "fundamental" category, health promotion (29.3%), lack of supplies (25.5%), and the provision of treatments (24.8%) stand out. Additionally, high values were recorded in the "important" category, particularly for community care (40.8%) and community capacity building (36.9%), highlighting the need for structural and organizational strengthening in these areas.

Nursing education to ensure quality and safety of care Regarding nursing education, there is a growing appreciation of higher academic qualifications. A bachelor's degree is mostly considered very important (47.1%), while a specialized master's degree (31.2%) and a doctorate (37.6%) stand out in the "essential" category. The bachelor's degree shows a higher concentration in the "important" (34.6%) and "very important" (37.6%) categories. On the other hand, vocational technical training is mainly classified as "important" (28.7%), indicating lower recognition in the more demanding categories, which suggests a perception of inadequacy in the face of the demands of professional practice.

3.3 WEAKNESSES IN NURSES' WORK

With regard to weaknesses in professional practice, participants identified insufficient

investment in health promotion (43.9%), a lack of human resources (40.1%), and a shortage of material resources (38.2%) as particularly significant issues. In the “fundamental” category, the most prominent issues are insufficient infrastructure and training (26.8%), as well as a lack of human and material resources (22.3%). Additionally, high values are recorded in the “important” category, particularly regarding the poor organization of the care process (42.7%) and insufficient community participation (42.7%), highlighting significant weaknesses at the organizational and community levels.

Nurses particularly value structured organizational contexts, including practice standards, professional recognition, and coordination with other professionals and supervisors, which are considered key to the quality of care. Technical and scientific knowledge emerges as a central factor, while community intervention activities, such as family health, treatments, consultations, and vaccination, predominate in professional practice.

Needs for improvement related to training and education in the community are identified, as well as constraints due to a shortage of human and material resources. Nursing education is valued, with a bachelor’s degree being the minimum requirement, although higher degrees are also recognized. Weaknesses persist in the organization of services, investment in health promotion, and community engagement, indicating priority areas for intervention.

Table 2

Distribution of community nurses' perceptions regarding work processes and care organization strategies

Dimensions	Not important (n, %)	Slightly important (n, %)	Important (n, %)	Very important (n, %)	Essential (n, %)
In the daily organization of nursing practice, care is primarily structured according to tasks.	4 (2.5%)	10 (6.4%)	62 (39.5%)	46 (29.3%)	35 (22.3%)
In the daily organization of nursing practice, care is delivered to individuals and their families.	3 (1.9%)	6 (3.8%)	49 (31.2%)	68 (43.3%)	31(19.7%)
In the daily organization of nursing practice, care is provided by a nurse responsible for the patient and/or family.	4 (2.5%)	5 (3.2%)	67 (42.7%)	54 (34.4%)	27 (17.2%)
Upon admission of an individual for care, a	2 (1.3%)	9 (5.7%)	39 (24.8%)	77 (49.0%)	30 (19.1%)

comprehensive health, social, and psychological assessment is performed.					
Based on data collected from the individual and their family, nursing diagnoses are established.	0 (0.0%)	4 (2.5%)	44 (28.0%)	57 (36.3%)	52 (33.1%)
For each individual and/or family under care, an individualized care plan is developed.	0 (0.0%)	5 (3.2%)	49 (31.2%)	59 (37.6%)	44 (28.0%)
In the care process, the best available resources and the most up-to-date scientific evidence are utilized.	0 (0.0%)	3 (1.9%)	53 (33.8%)	68 (43.3%)	33 (21.0%)
The outcomes of nursing interventions are evaluated on a daily basis.	2 (1.3%)	5 (3.2%)	44 (28.0%)	66 (42.0%)	40(25.5%)
At the end of the care process, the satisfaction of the individual and their family is assessed.	1 (0.6%)	5 (3.2%)	46 (29.3%)	66 (42.0%)	39 (24.8%)
Documentation is carried out regarding the progression of health problems of individuals under care.	1(0.6%)	4 (2.5%)	47 (29.9%)	68 (43.3%)	37 (23.6%)

Note: Data are presented as n (%). Responses were assessed using a five-point Likert scale: 1 = Not important, 2 = Slightly important, 3 = Important, 4 = Very important, and 5 = Essential. Percentages may not total 100% due to rounding.
Source: Prepared by the authors.

Table 2 presents community nurses' perceptions regarding the strategies adopted in the work process, highlighting practices considered essential for the organization, planning, and quality of nursing care. Regarding the daily organization of care, the results indicate a clear preference for person and family centered models and for assigning a nurse responsible for the patient and/or family (31.2–42.7% considered important; 34.4–43.3% very important; 17.2–19.7% essential). However, task-based organization of care remains present (39.5% important; 29.3% very important). These findings suggest the coexistence of hybrid care models, in which task-based approaches coexist with more individualized, patient centered care. Variability in responses may reflect differences in the interpretation and implementation of organizational practices, particularly regarding whether care tasks are delivered individually or in groups, and the extent of professional responsibility depending on patient or family complexity.

In the area of care assessment and planning, nurses frequently perform health, social, and psychological assessments (49.0% very important), formulate nursing diagnoses (36.3%

very important; 33.1% essential), and develop individualized care plans (37.6% very important; 28.0% essential). These findings suggest a high level of alignment with recommended standards of nursing practice, although opportunities remain for further consolidation of best practices.

Regarding the quality, evaluation, and documentation of care, there is strong recognition of the importance of using the best available resources and scientific evidence (43.3% very important; 21.0% essential), evaluating intervention outcomes on a daily basis (42.0% very important; 25.5% essential), documenting the progression of health problems (43.3% very important; 23.6% essential), and assessing the satisfaction of individuals and families (42.0% very important; 24.8% essential). Overall, these data indicate a consistent focus on quality, safety, and continuity of care, while also highlighting variability in the interpretation and operationalization of professional roles and responsibilities.

To test the hypotheses, given the absence of a normal distribution of the data, the nonparametric Kruskal–Wallis test was used, as it is considered appropriate for comparing independent groups under these conditions.

Table 3

Associations between sociodemographic characteristics and community nurses' perceptions: Mann–Whitney U and Kruskal–Wallis tests

Null hypothesis	Test	Sig.
The distribution of conditions facilitating quality job is the same across gender categories.	Mann-Whitney U	0.061
The distribution of job nature is the same across gender categories.	Mann-Whitney U	0.363
The distribution of areas needing improvement is the same across gender categories.	Mann-Whitney U	0.360
The distribution of training for quality is equal across gender categories.	Mann-Whitney U	0.207
The distribution of work-related stress among is the same across gender categories.	Mann-Whitney U	0.314
The distribution of Work Process is the same across gender categories.	Mann-Whitney U	0.177
The distribution of Facilitating conditions for quality work is the same across age categories.	Kruskal-Wallis	0.337
The distribution of the nature of their work is the same across age groups.	Kruskal-Wallis	0.340
The distribution of areas needing improvement is the same across age groups.	Kruskal-Wallis	0.154
The distribution of training for quality is the same across age categories.	Kruskal-Wallis	0.745
The distribution of weaknesses in nurses' work is the same across age categories.	Kruskal-Wallis	0.303
The distribution of work processes is the same across age categories.	Kruskal-Wallis	0.376

The distribution of Facilitating Conditions for Quality Work is the same across the Years of education.	Kruskal-Wallis	0.958
The distribution of Nature of work is equal across the categories of Years of training.	Kruskal-Wallis	0.658
The distribution of areas needing improvement is the same across the categories of years of education.	Kruskal-Wallis	0.749
The distribution of training for quality is equal across the categories of Years of training.	Kruskal-Wallis	0.252
The distribution of work-related difficulties among nurses is the same across the categories of years of training.	Kruskal-Wallis	0.421
The distribution of work processes is the same across the categories of years of training.	Kruskal-Wallis	0.671
The distribution of Conditions facilitating quality work is the same across the categories of length of service.	Kruskal-Wallis	0.381
The distribution of Nature of work is the same across the categories of length of service.	Kruskal-Wallis	0.379
The distribution of areas needing improvement is the same across all length-of-service categories.	Kruskal-Wallis	0.284
The distribution of training for quality is the same across the categories of length of service.	Kruskal-Wallis	0.043
The distribution of work-related stress among nurses is the same across the categories of length of service.	Kruskal-Wallis	0.084
The distribution of work processes is the same across the categories of length of service.	Kruskal-Wallis	0.487
The distribution of Conditions facilitating quality work is the same across the categories of Academic degree in Nursing.	Kruskal-Wallis	0.979
The distribution of Nature of work is the same across the categories of Academic degree in Nursing.	Kruskal-Wallis	0.958
The distribution of areas needing improvement is the same across the categories of academic degree in the nursing program.	Kruskal-Wallis	0.598
The distribution of education levels for quality is the same across the academic degree categories for the nursing program.	Kruskal-Wallis	0.090
The distribution of work-related difficulties among nurses is the same across the categories of academic degree in nursing.	Kruskal-Wallis	0.208
The distribution of work processes is the same across the categories of academic degree in nursing.	Kruskal-Wallis	0.811

Note: p-values were obtained using the Mann–Whitney U test or the Kruskal–Wallis test, as appropriate. Statistical significance was set at $p < 0.05$. Statistically significant results are shown in bold.
Source: Prepared by the authors.

The statistical analysis revealed that, in most of the dimensions assessed including conditions facilitating quality work, nature of the work, areas for improvement, weaknesses, and strategies in the work process no statistically significant differences were observed based on the nurses' sociodemographic characteristics, namely gender, age, academic degree, and years of training. Far from constituting a weakness of the study, this result represents a relevant finding, as it suggests a widely shared perception among professionals, regardless of their individual profile.

The cross-sectional nature of these perceptions points to a homogeneity in the context of community nursing practice in Timor-Leste, where challenges and working conditions are

experienced similarly by nurses. This uniformity can be interpreted as a reflection of common structural constraints, such as a shortage of human and material resources, limitations in service organization, and constraints in the health infrastructure, which broadly affect professional practice.

Furthermore, the absence of significant differences reinforces the idea that the problems identified are not limited to specific groups but rather are associated with the overall functioning of the health care system, highlighting the need for systemic and organizational interventions rather than approaches focused solely on specific professional subgroups. This finding is consistent with studies conducted in other contexts of fragile health systems, in which it is observed that structural factors tend to override individual variables in determining nursing work conditions and quality.

The exception observed in the “training for quality” dimension based on length of service suggests, however, that professional experience influences the perception of training needs, reflecting different expectations and levels of professional maturity throughout one's career. Nevertheless, the overall pattern of results reinforces that the challenges faced by community nurses in Timor-Leste are collective and cross-cutting, requiring integrated responses at the levels of health policy, service management, and continuing education.

4 DISCUSSION

The findings of this study characterize the profile of community nurses in Timor-Leste and provide insight into their perceptions of professional practice. The predominance of female nurses reflects the continued feminization of the nursing workforce globally, particularly in primary and community care contexts (World Bank & Oxford Policy Management, 2015; UNFPA, 2022).

The workforce is predominantly young and early in their professional careers, indicating ongoing challenges in retaining experienced nurses. This demographic profile suggests a process of workforce renewal within a health system undergoing transition and strengthening.

Early career nurses reported strong engagement in continuing education and openness to evidence-based practice and organizational change. This aligns with evidence suggesting that less experienced nurses are often more receptive to new clinical approaches and professional development opportunities, particularly in evolving health systems (Aiken *et al.*, 2014; WHO, 2020). From an educational and policy perspective, this represents an

opportunity to strengthen competency development and support the implementation of innovative community nursing models.

In contrast, the limited presence of experienced nurses may negatively affect contextual knowledge, clinical reasoning, and continuity of care. Clinical expertise develops progressively and is strongly associated with more advanced decision-making and integration of complex practice environments (Benner, P. 1984; WHO, 2018). This highlights the importance of retaining experienced nurses within community settings.

These findings emphasize that workforce planning should consider skill mix and experience distribution rather than numerical adequacy alone. Evidence shows that teams with diverse levels of experience enhance care quality through knowledge sharing, mentorship, and complementary competencies (Reeves *et al.*, 2017; WHO, 2010). This is particularly relevant for community nursing education and practice development.

Mixed experience teams may therefore represent an effective strategy to strengthen community nursing care. Experienced nurses can support clinical mentoring, community engagement, and decision making in complex contexts, while less experienced nurses contribute with adaptability, up to date knowledge, and openness to innovation. This complementary dynamic may improve both service delivery and professional development outcomes.

Regarding educational background, the coexistence of bachelor prepared, and technically trained nurses reflects transitional educational systems in low and middle-income countries. Continuing professional development remains essential to ensure competence, quality, and safe practice (WHO, 2020).

Nurses highlighted the importance of standardized practice, interprofessional collaboration, and professional recognition as key factors influencing quality of care. These are consistent with international evidence linking collaborative practice and structured care processes to improved outcomes in primary care settings (World Bank & Oxford Policy Management, 2015).

The main challenges identified include limited resources, insufficient community capacity building, and weak community engagement. These structural barriers are well documented in similar health system contexts and can negatively impact the effectiveness of community-based nursing interventions (WHO, 2024).

Statistical findings indicated that sociodemographic variables had limited influence on perceptions, except for length of professional experience in relation to perceptions of training

for quality of care. This suggests that career stage remains an important determinant of how nurses perceive professional development needs.

Overall, the results indicate that community nursing quality in Timor-Leste is shaped by an interaction of individual, organizational, and structural factors, particularly workforce experience, education, continuing training, resource availability, and community engagement. Strengthening nursing retention strategies, improving skill mix balance, and investing in continuing professional development are essential priorities for health system strengthening.

Study limitations include the use of non-probability sampling and the contextual specificity of the setting, which may limit generalizability. Despite this, the findings provide relevant evidence to inform nursing workforce development and primary health care strengthening strategies.

5 CONCLUSION

This study shows that community nursing in Timor-Leste is a central component of primary health care delivery, contributing to health promotion, disease prevention, and continuity of care across individual, family, and community levels. Nurses perceive their practice as highly oriented toward comprehensive and person-centered care, despite operating within a context marked by structural and organizational constraints.

Persistent limitations, particularly shortages of human and material resources and weaknesses in service organization, continue to affect the quality and sustainability of care delivery. These findings highlight that challenges in community nursing are primarily systemic rather than individual, requiring structural responses at health system level.

The absence of significant differences across most sociodemographic variables further supports the interpretation that these constraints are shared across the workforce, reflecting a relatively homogeneous practice environment. This reinforces the need for system level interventions focused on workforce planning, resource allocation, and organizational strengthening rather than isolated individual strategies.

From a practice and management perspective, the results underscore the relevance of person and family centered models of care supported by structured nursing processes, including assessment, planning, implementation, and evaluation. Continuing professional development, aligned with different career stages, emerges as a key mechanism to enhance clinical competence, quality of care, and responsiveness to evolving community needs.

At policy level, strengthening community nursing in Timor-Leste requires integrated strategies that combine workforce development, improvement of working conditions, and increased community engagement. Ensuring team stability, optimizing skill mix, and reinforcing professional capacity are essential to support a more resilient and effective primary health care system.

Overall, this study contributes to the limited body of evidence on community nursing in fragile health system contexts, providing empirical insights that can inform workforce policies, guide health system strengthening strategies, and support context-sensitive nursing development.

REFERENCES

Aiken LH, Sloane DM, Bruyneel L, Van den Heede K, Sermeus W. Nurse staffing and education and hospital mortality in nine European countries: a retrospective observational study. Lancet. 2014;383(9931):1824–1830. doi:10.1016/S0140-6736(13)62631-8

Benner P. From novice to expert: excellence and power in clinical nursing practice. Menlo Park (CA): Addison-Wesley; 1984.

Democratic Republic of Timor-Leste. Decree-Law No. 14/2004 of 1 September on the exercise of health professions. Jornal da República. Available from: https://www.mj.gov.tl/jornal/?q=node/1450

Democratic Republic of Timor-Leste. Decree-Law No. 40/2011 of 21 September amending Decree-Law No. 14/2004 on the exercise of health professions. Jornal da República. Available from: https://www.mj.gov.tl/jornal/?q=node/1176

Gomes R, Silva P, Almeida J. Person-centered care: an approach in community nursing. J Patient Cent Care. 2023;41(4):143–157.

Gray BH, Sarnak DO, Burgers JS. Home care by self-governing nursing teams: the Buurtzorg model. Commonwealth Fund. 2015. Available from: https://www.commonwealthfund.org/publications/case-study/2015/dec/home-care-self-governing-nursing-teams-buurtzorg-model

Hou X, McPake B, Tang S, Cometto G. What do health workers in Timor-Leste want, know and do? Pac Health Dialog. 2016;22(2):1–10. Available from: https://pmc.ncbi.nlm.nih.gov/articles/PMC5116185/

Leininger MM. Transcultural nursing: concepts, theories, research & practice. 3rd ed. New York: McGraw-Hill; 2002.

Mendes J, Costa R. Interpersonal relationships and community-centered care. Rev Bras Enferm Comun. 2022;15(2):45–60.

Peplau HE. Interpersonal relations in nursing: a conceptual frame of reference for psychodynamic nursing. New York: Springer Publishing Company; 1991.

Pereira F, Santos E. Patient satisfaction and the effectiveness of the Buurtzorg model. J Nurs Care Innov. 2023;20(1):88–101.

Reeves S, Pelone F, Harrison R, Goldman J, Zwarenstein M. Interprofessional collaboration to improve professional practice and healthcare outcomes. Cochrane Database Syst Rev. 2017;6:CD000072. doi:10.1002/14651858.CD000072.pub3

Rodrigues L, Pereira A. Community nursing: challenges and opportunities for health promotion. Public Health Nurs Rev. 2023;29(3):210–223.

Silva J, Almeida R, Costa M. The role of community nurses in public health promotion. J Community Nurs. 2023;12(4):123–135.

United Nations Population Fund. Timor-Leste gender and social inclusion analysis and action plan. 2022. Available from: https://banyanglobal.com/wp-content/uploads/2022/03/LHSS_TIMOR-LESTE_GESI-Analysis-and-Action-Plan_508c.pdf

World Bank, Oxford Policy Management. Health worker survey in Timor-Leste. 2015. Available from: https://documents1.worldbank.org/curated/en/986251468187127947/pdf/103443-WP-P146118-PUBLC-Timor-Leste-Health-Worker-Survey-Final-Report-14June15.pdf

World Health Organization. Declaration of Astana: global conference on primary health care. 2018. Available from: https://www.who.int/publications/i/item/WHO-HIS-SDS-2018.61

World Health Organization. Framework for action on interprofessional education & collaborative practice. 2010. Available from: https://www.who.int/publications/i/item/framework-for-action-on-interprofessional-education-collaborative-practice

World Health Organization. State of the world's nursing 2020: investing in education, jobs and leadership. Geneva: WHO; 2020. Available from: https://www.who.int/publications/i/item/9789240003279

World Health Organization. Timor-Leste health workforce country profile. 2024. Available from: https://cdn.who.int/media/docs/default-source/searo/his/hrh-profiles/timor_leste_hrh_countryprofile_final_09232024.pdf

Zhang X, Li Y, Wang H. The Buurtzorg model: an analysis of effectiveness in the implementation of home care. Glob Health Nurs. 2024;15(2):180–192.