



ORIGINALS

Standardized language in Nursing practices to make visible components of Primary Care in Maternal Health

Lenguaje estandarizado en prácticas de Enfermería para visibilizar componentes de la Atención Primaria en Salud Materna

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ABSTRACT:

Introduction: Primary Care and Maternal Health are priorities for nursing training institutions.

Objective: The objective of this study was to highlight components of Primary Maternal Health Care during nursing training practices using standardized language at the Fundación Universitaria del Área Andina, Pereira, Colombia.

Material and Method: A descriptive, quantitative, cross-sectional study with an analytical component, using an institutional database. A total of 6,937 records of interventions for women during pregnancy, childbirth, and the postpartum period, which met the inclusion criteria and that were performed between 2022 and 2024, were intentionally selected. The following criteria were selected with an 85% discrimination score: NANDA diagnoses, NOC expected outcomes, and NIC nursing interventions; all were classified according to their respective domains. SPSS-V.26 and NNConsult software were used.

Results: The following domains predominated: NANDA: Sexuality: 19.9% (1324) and Health Promotion: 17.10% (1186). NOC domains: Health knowledge and behavior: 50.96% (3535) and Health and quality of life: 14.10% (978) and NIC domains: Behavioral: 34.76% (2411) and Family: 26.47% (1836). The following PHC components were made visible: Comprehensive care, family and community guidance, emphasis on promotion and prevention, and Risk management.

Discussion: This manuscript contributes to the still limited literature on standardized language in PHC, strengthening nursing training and promoting effective, safe, and comprehensive care using NANDA, NOC, and NIC.

Conclusions: The emphasis on maternal PHC is visible through health education, comprehensive care for the mother-child binomial, and maternal-perinatal risk management.

Keywords: Primary Health Care; Maternal health; Students Nursing; Standardized Nursing Terminology.

RESUMEN:

Introducción: La Atención Primaria y la Salud Materna son prioridades que comprometen a las Instituciones formadoras de Profesionales de Enfermería.

Objetivo: El objetivo de este estudio fue visibilizar componentes de la Atención Primaria en Salud Materna durante las prácticas formativas de Enfermería usando lenguaje estandarizado en la Fundación Universitaria del Área Andina Seccional Pereira- Colombia.

Material y Método: Estudio descriptivo, cuantitativo, transversal, con componente analítico, utilizando base de datos institucional. Se seleccionaron intencionalmente 6.937 registros de intervenciones a la mujer durante el embarazo, parto y puerperio realizadas en el período 2022 a 2024 que cumplieron criterios de inclusión. Con discriminación del 85%, se seleccionaron Diagnósticos-NANDA, Resultados Esperados- NOC e Intervenciones de Enfermería- NIC. Todos se clasificaron según los respectivos Dominios. Se utilizó SPSS-V.26 y software NNConsult.

Resultados: Predominaron: Dominios NANDA: Sexualidad: 19,9% (1324) y Promoción de la salud: 17,10% (1186). Dominios NOC: Conocimiento y Conducta de salud: 50,96% (3535) y Salud y calidad de vida: 14,10% (978) y Dominios NIC: Conductual: 34,76 % (2411) y Familia: 26,47% (1836), Se visibilizaron componentes de APS: atención Integral, orientación familiar y comunitaria, énfasis en promoción y prevención y Gestión del riesgo.

Discusión: Este manuscrito aporta a una literatura aún limitada sobre lenguaje estandarizado en APS, fortaleciendo la formación enfermera y promoviendo un cuidado eficaz, seguro e integral mediante el uso de NANDA, NOC y NIC.

Conclusiones: El énfasis en APS materna es visible a través de Educación para la salud, cuidados integrales al binomio madre-hijo y Gestión del riesgo materno-perinatal.

Palabras clave: Atención Primaria; Salud materna; Estudiantes de Enfermería; Terminología estandarizada de Enfermería.

INTRODUCTION

Primary Health Care (PHC) is a fundamental global strategy for ensuring accessible, comprehensive, and high-quality care that adapts to people's needs. This strategy has a positive impact on community well-being and the sustainability of health systems. According to the World Health Organization (WHO), maternal deaths increased in 2017, most of which were preventable through adequate care at the primary health care level^(1, 2). In this regard, several successful experiences of PHC implementation in Latin America have been described⁽³⁾, mostly in Colombia⁽⁴⁾ and Ecuador⁽⁵⁾, improvements have been made in access to and quality of services, as well as in the identification of risk factors and the implementation of necessary preventive measures. Likewise, the need for the nursing role within the health system to guarantee timely and effective care is highlighted; in this sense, the commitment of the Academy has been emphasized, seeking the articulation from formative practice for the appropriate components of PHC⁽⁶⁾. According to the WHO, 25% of neonatal deaths occur during childbirth, a percentage that is closely correlated with the availability of professional support and prenatal education, which reinforces the need for organized nursing interventions. For its part, Colombia maintains an active commitment to reducing maternal mortality⁽⁷⁾ and, therefore, has included Primary Health Care and the training of human resources in health as strategic pillars in its Ten-Year Health Plan 2022–2031⁽⁸⁾.

Currently, the training of nursing professionals is mainly guided by the use of internationally standardized language with the NANDA Taxonomy (*North American Nursing Diagnosis Association*)⁽⁹⁾, NOC (*Nursing Outcomes Classification*)⁽¹⁰⁾, NIC (*Nursing Interventions Classification*)⁽¹¹⁾, which have become indispensable tools in teaching, research and practice that allow for pedagogical teaching⁽¹²⁾, improving students' cognitive skills. These tools promote the systematization and analysis of the care process, and, in practice, improve the quality of care and adherence to evidence-based protocols, reducing clinical errors in complex obstetric situations by 33%⁽¹³⁾.

Therefore, the standardized NANDA-NOC-NIC language has not only become imperative for the training of nursing students in the care of women in the reproductive period, but also facilitates collaboration between education sectors, improves the quality and continuity of care, helps to develop thinking skills and clinical judgment on maternal-perinatal issues, and reinforces the recognition, planning and evaluation of the care provided, which ensures efficient and effective care^(14,15).

Furthermore, the incorporation of standardized language into the curriculum of nursing programs - *including the use of Domains and Classes of the NANDA-NOC-NIC taxonomies* - is useful in any scenario where nursing care is provided, as it helps to organize information and quickly and structurally understand the care situation, enables a patient-centered approach by addressing specific health problems with high precision, facilitates complete and effective care planning, and allows the selection of specific interventions with goals adapted to each domain and class⁽¹⁶⁾.

However, the use of standardized language in Primary Care is not extensively documented and presents challenges for its application in this context⁽¹⁷⁾. Given its usefulness, it is necessary to highlight its attributes to take advantage of its benefits. This article aims to highlight components of Primary Maternal Health Care during nursing training practices using standardized language at the *Fundación Universitaria del Área Andina Seccional Pereira - Colombia*, from 2022 to 2024. It is hoped that the results will contribute to optimizing the use of the NANDA-NOC-NIC taxonomy in professional nursing practice.

MATERIALS AND METHODS

A descriptive, quantitative, and cross-sectional study with an analytical component was designed, using the nursing training practices information system database of the Andean Area University Foundation as a secondary source. This system, created between 2011 and 2015, uses identification codes for the population served to guarantee data protection. Since its creation, it has facilitated six scientific publications and numerous national and international presentations. It was registered with the Colombian Ministry of the Interior: F_PAE1361245/30-06-2017⁽²⁰⁾. This system is updated every two years, in conjunction with updates to the standardized language. Between 2022 and 2024, the following taxonomies were used: NANDA-I Diagnoses (13th ed., 2021-2023), NOC Expected Outcomes (6th ed., 2018), and NIC Nursing Interventions (6th ed., 2018).

From a total of 53,356 nursing interventions recorded by students and validated by faculty in the Information System, 7,420 records corresponding to the subject "Nursing Care of Women, Mothers, and Newborns" were selected during the period 2022-2024,

and 6,937 were included in the study that met the following criteria: Intramural and extramural practices in health institutions or communities linked to teaching-service agreements with the University Institution; Nursing interventions performed on women during pregnancy, childbirth, and the postpartum period, and complete and correctly filled-out records, were included. The 483 excluded records had incomplete information.

In accordance with the study objective, the variables characterizing the population served (age, socioeconomic status, insurance plan), the training context (municipality, area, and practice setting), and nursing care were analyzed: NANDA diagnoses, NOC expected outcomes, and NIC nursing interventions. An 85% threshold was used as a discrimination guideline to ensure representativeness and validity of the qualitative information. Sociodemographic and training variables were related to the NANDA, NOC, and NIC domains and the elements of Primary Health Care. The NNN Consult software²¹ was used for the taxonomic classification of the standardized language into Domains and Classes, and IBM SPSS-v.26 software was used for statistical analysis. To identify statistical associations, the chi-square test was applied, and when the Shapiro-Wilk test confirmed a lack of normality, Spearman's correlation was used. An ANOVA was also performed for each NANDA domain according to the "Type of practice". All the collected data are freely available for access and consultation in Papyrus Data set⁽²²⁾.

Ethical considerations: The Ethics Committee of the *Fundación Universitaria del Área Andina* (Colombia) authorized the analysis of the database of the Training Practices Information System and endorsed it through the minutes of July 27, 2022. Access to the information was restricted exclusively to the research team. Furthermore, all records were coded and handled anonymously, guaranteeing data confidentiality.

RESULTS

Characteristics of the population served during training practices

During the three consecutive years corresponding to the period of From 2022 to 2024, the academic staff of the Nursing Program at the Pereira branch of the *Fundación Universitaria del Área Andina* provided care to 1,268 women during pregnancy, childbirth, and the postpartum period, with an estimated coverage of 31.39% (398) in outpatient consultations, 29.34% (372) in the delivery room, and 39.27% (498) in the Gynecology and Obstetrics inpatient wards. Additionally, 204 newborns received care. Most of the population served consisted of 796 (62.77%) women between the ages of 20 and 39. 866 (68.30%) patients were seen in clinical practice settings, and 402 (31.70%) in community settings. Community care was primarily provided in outpatient consultations through programs focused on prenatal care, family planning, and the prevention of sexually transmitted infections. In addition, health education processes were carried out in neighborhoods and community spaces of interest.

The majority of the population lived in socioeconomic strata 1 and 2: 1,100 (86.75%), while the remainder lived in strata 3 and 4: 168 (13.25%). Additionally, one-third of the population was enrolled in the subsidized healthcare system: 964 (76.03%), followed by the contributory system: 304 (23.97%). It is worth noting the high coverage of maternal healthcare services: 886 (69.87%) women came from municipalities other than the capital of the Department of Risaralda.

Nursing Diagnoses - NANDA

A total of 6,937 diagnostic records were analyzed. Using 85% as the study's exclusion criterion, it was found that 85.07% (5,901) of the records were concentrated in six NANDA I Domains: Sexuality: 19.09% (1,324); Health Promotion: 17.10% (1,186); Safety/Protection: 15.86% (1,100); Comfort: 13.12% (910); Nutrition: 12.17% (844); and Activity/Rest: 7.74% (537). The remaining NANDA domains comprised 14.93% (1,036). The nursing diagnoses with the highest proportions in the overall classification were: [0221] Ineffective Maternity Process, [0188] Tendency to Engage in Risky Behaviors, and [0256] Labor Pain. Graph 1 shows the distribution of NANDA domains according to population variables and training practices, and Table 1 shows the distribution of NANDA according to the respective classes and the relevant NANDA according to domain.

Figure 1. NANDA I diagnostic domains according to characteristics of the population served during training practices.

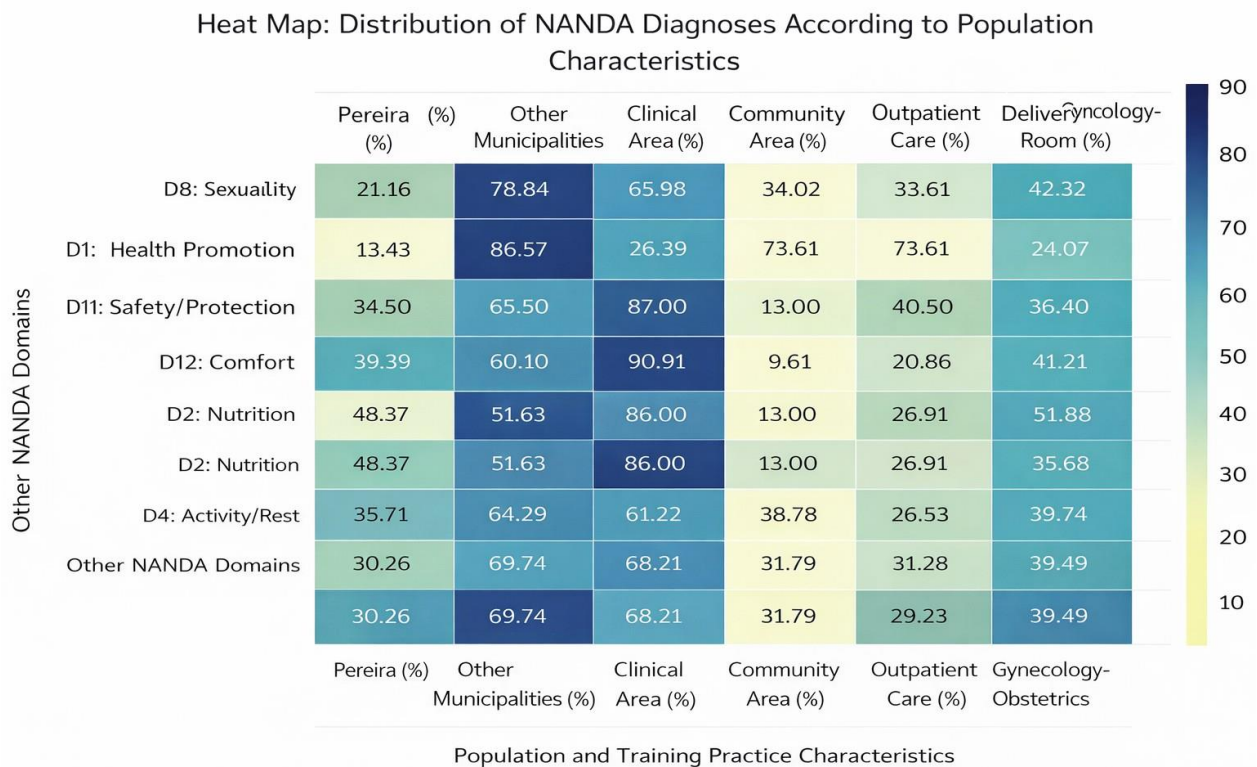


Table 1. Relevant NANDA Domains, Classes, and Diagnoses.

NANDA Domains N=6937	NANDA Classes	% (frequency)	Relevant NANDA diagnoses by Domain
Sexuality 19.9% (1324)	Reproduction	78.93% (1045)	[0221] Ineffective maternity process
	Sexual function	21.07% (279)	[0065] Ineffective sexual pattern
	Subtotal	100% (1324)	
Health Promotion 17.10% (1186)	Health management	75.30% (893)	[0188] Tendency to adopt health risk behaviors
	Health awareness	24.70% (293)	[0292] Ineffective health maintenance behaviors
	Subtotal	100% (1186)	

NANDA Domains N=6937	NANDA Classes	% (frequency)	Relevant NANDA diagnoses by Domain
Security/ Protection 15.86% (1100)	Physical injury	68.18% (750)[0206]	Risk of bleeding
	Infection	19.09% (210)[0044]	Impaired tissue integrity
	Thermoregulation	9.18% (101)[0004]	Risk of infection
	Environmental hazards	1.91% (21)[0181]	Pollution
	Violence	1.64% (18)[0280]	Neonatal hypothermia
	Subtotal	100% (1100)	
Comfort 13.12% (910)	Physical comfort	95.60% (870)[0256]	Labor pain
	Comfort of the environment	2.31% (21)[0214]	Discomfort
	Social comfort	2.09% (19)[0053]	Social isolation
	Subtotal	100% (910)	
Nutrition 12.17% (844)	Ingestion	73.70% (622)[0104]	Ineffective breastfeeding
	Hydration	15.17% (128)[0026]	Excess liquid volume
	Metabolism	11.14% (94)[0179]	Risk of unstable blood glucose level
	Subtotal	100% (844)	
Activity/Rest 7.74% (537)	Self-care	37.99% (204)[0182]	Readiness to enhance self-care
	Responses. CV/pulmonary	29.80% (160)[0029]	Decreased cardiac output
	Energy balance	10.61% (57)[0093]	Fatigue
	Sleep/Rest	7.82% (42)[0095]	Insomnia
	Subtotal	100% (537)	
Subtotal of relevant NANDA domains		85.07% (5901)	
Elimination and Exchange		4.90% (340)[0016]	Impaired urinary elimination
Coping/Stress Tolerance		3.46% (240)[0146]	Anxiety
Perception/Cognition		2.39% (166)[0126]	Deficient knowledge
Role/Relationships		2.16% (150)[0063]	Dysfunctional family processes
Vital principles		0.98% (68)[0243]	Willingness to improve decision making
Self-perception		0.91% (63)[0120]	Situational low self-esteem
Growth/Development		0.13% (9)[0348]	Risk of developmental delay in children
Total NANDA Domains		100% (6937)	

Source: Prepared by authors based on analyzed database records

Expected Results - NOC

89.32 % (6195) of the expected results were grouped into four NOC Domains: Health Knowledge and Behavior: 50.96% (3535), Health and Quality of Life: 14.10% (978), Physiological Health: 12.84% (891) and Psychosocial Health: 11.42% (791) and the rest corresponded to the domains of Functional Health: 7.36% (516) and Family Health: 3.32% (226).

Table 2 shows the distribution of NOC results by domain and class. Similarly, relevant results were recorded for each NOC domain.

Table 2. Expected NOC Results according to relevant NOC Outcome Domains.

NOC Domains (N=6937)	NOC Classes	% (frequency)	Relevant NOCs by Domain
Health Knowledge and Behavior 50.96% (3535)	Healthy behavior	78.78% (2785)	Health-seeking behavior
	Risk control	14.48% (512)	Knowledge of Infant Care
	Health management	4.92% (174)	Knowledge. Healthy lifestyle
	Beliefs about health	1.13% (40)	Knowledge: Gestation
	Vital skills for health support	0.51% (18)	Maternal health behavior in the postpartum period
	Security	0.17% (6)	Knowledge: Breastfeeding
	Subtotal	100.00% (3535)	
Health and quality of life 14.10% (978)	Health status	64.42% (630)	Maternal state: during childbirth
	Health and perceived life situation	17.38% (170)	Maternal state: prepartum
	Symptoms	13.80% (135)	Maternal state: puerperium
	Satisfaction with care	4.40% (43)	Personal well-being
	Subtotal	100.00% (978)	
Physiological health. 12.84% (891)	Digestion and nutrition	34.46% (307)	Establishing Breastfeeding
	Cardiopulmonary	20.31% (181)	Severity of blood loss
	Elimination	15.26% (136)	Urinary elimination
	Neurocognitive	7.74% (69)	Maintaining breastfeeding
	Tissue integrity	7.18% (64)	Tissue integrity of skin and mucous membranes
	Therapeutic response	5.39% (48)	Communication
	Metabolic regulation	3.70% (33)	Gastrointestinal function
	Immune response	3.48% (31)	Thermoregulation of the newborn
	Fluids and electrolytes	2.47% (22)	Severity of hypovolemic shock
	Subtotal	100.00% (891)	
Psychosocial health. 11.42% (791)	Psychosocial adaptation	51.20% (405)	Acceptance of health status
	Self-control	24.27% (192)	Coping
	Psychological well-being	15.93% (126)	Self-control of anxiety
	Social interaction	8.60% (68)	Self-control of fear
	Subtotal	100.00% (791)	
Relevant NOC subtotal		89.32% (6195)	
Functional health		7.36% (516)	Newborn Adaptation
Family health		3.32% (226)	Family support
Total NOC Results		100.00% (6937)	

Source: Prepared by authors based on analyzed database records

Nursing Interventions - NIC

91.81 % (6369) NIC interventions were concentrated in four NIC domains: Behavioral: 34.76% (2411), Family: 26.47% (1836), Basic Physiological: 16.56% (1149), and Complex Physiological: 14.03% (973). The remainder corresponded to Safety: 6.82%

(473), Health System: 1.27% (88), Family Health: 0.06% (4), and Community: 0.04% (3). Table 3 presents the distribution of NIC interventions by domain and class.

Table 3. NIC Interventions according to relevant NIC Intervention Domains

NIC Domains (N=6937)	NIC Classes	% (frequency) NIC relevant by Domain
Behavioral 34.76% (2411)	Coping support	43.84% (1057)
	Health education	32.81% (791)
	Behavioral therapy	17.13% (413)
	Promoting psychological comfort	4.02% (97)
	Cognitive therapy	1.78% (43)
	Communication management	0.41% (10)
	Subtotal	100% (2411)
Family 26.47% (1836)	Pregnancy care	65.36% (1200)
	Family. Childcare	25.93% (476)
	Family. Lifelong Care	8.71% (160)
	Subtotal	100% (1836)
Basic physiologica I 16.56% (1149)	Nutritional support	46.13% (530)
	Facilitating self-care	24.19% (278)
	Activity and exercise management	10.79% (124)
	Promoting physical comfort	9.92% (114)
	Evacuation management	8.01% (92)
	Managing immobility	0.96% (11)
	Subtotal	100% (1149)
Complex physiologica I. 14.03% (973)	Medication management	55.70% (542)
	Tissue perfusion management	26.72% (260)
	Skin/wound management	7.19% (70)
	Electrolyte and acid-base management	3.19% (31)
	Respiratory management	2.47% (24)
	Thermoregulation	2.16% (21)
	Acid-base balance	1.64% (16)
	Neurological management	0.92% (9)
	Subtotal	100% (973)
Relevant NIC subtotal		91.81% (6369)
Security		6.82% (473)
Healthcare system		1.27% (88)
Family health		0.06% (4)
Community		0.04% (3)
Total NIC Results		100% (6937)

Source: Prepared by authors based on analyzed database records

Links between NANDA-NOC-NIC

Table 4 presents the relationship between the relevant NANDA Domains, NOC Domains, and NIC Domains, demonstrating the coherence in the planning and execution of the Nursing Process. In the Domain (D.) "Sexuality," the NOCs for health knowledge and behavior were used, and interventions were carried out with the family. In the D. "Health Promotion," the NOCs for health knowledge and behavior were used, and interventions in the behavioral domain predominated. In the D. "Safety/Protection," the NOCs for physiological health and the NICs for the complex physiological domain were prominent. In the D. "Comfort," the NOC outcomes related to health/quality of life and the NICs for the D. "Family" were established. In the D. "Nutrition," the NOCs for physiological health were prioritized, and the interventions focused primarily on the D. "Family." In D. "Activity/Rest" NOC Outcomes of health knowledge and behavior were presented and interventions in the basic behavioral and physiological domains were highlighted.

A statistically significant association was found between the NANDA diagnosis "Health Promotion" and the NIC intervention "Behavioral", with $X= 323.16$ and $p= 00000004751$. The proportion of the "Sexuality" domain is statistically higher than that of "Health Promotion" ($p = 0.0023$), with a confidence interval for the difference between proportions of 0.71% to 3.27%; therefore, there is a significant difference between both domains in the analyzed sample, which is explained by the type of population analyzed: women in the reproductive period.

Subsequently, ANOVA was performed for each NANDA Domain according to the type of practice, revealing that the presence of some NANDA Domains varies depending on the type of clinical practice. The NANDA Domain "Health Promotion" was found to be most prevalent in outpatient consultations (75.2%), followed by the Obstetrics and Gynecology Inpatient Service (18.2%) and the Delivery Room (6.7%). This makes sense given that these settings offer more opportunities for preventive and health promotional activities.

Table 4. Integration of NANDA-NOC-NIC in the nursing care of women during pregnancy, childbirth and postpartum during training practices.

	Sexuality	Health promotion	Security/ Protection	Comfort	Nutrition	Activity/ Rest
NOC Outcome Domains	% (n)	% (n)	% (n)	% (n)	% (n)	% (n)
Health Knowledge and Behavior	66.69% (883)	65.09% (772)	32.00% (352)	49.01% (446)	45.73% (386)	54.00% (290)
Health and quality of life	10.50% (139)	9.27% (110)	21.91% (241)	27.25% (248)	9.95% (84)	13.78% (74)
Physiological health	2.49% (33)	3.54% (42)	32.36% (356)	0.66% (6)	25.95% (219)	4.66% (25)
Psychosocial health	11.18% (148)	15.01% (178)	1.91% (21)	12.20% (111)	5.69% (48)	8.94% (48)
Other NOC domains	9.14% (121)	7.08% (84)	11.82% (130)	10.88% (99)	12.68% (107)	18.62% (100)
Total	100.0% (1324)	100.0% (1186)	100.0% (1100)	100.0% (910)	100.0% (844)	100.0% (537)

Domains of Interventions NIC	Sexuality	Health promotion	Security/ Protection	Comfort	Nutrition	Activity/ Rest
Behavioral	35.95% (476)	59.70% (708)	12.27% (135)	23.08% (210)	18.72% (158)	41.15% (221)
Family	41.16% (545)	5.31% (63)	29.73% (327)	38.79% (353)	47.87% (404)	6.89% (37)
Basic Physiology	14.12% (187)	20.15% (239)	10.00% (110)	14.51% (132)	19.79% (167)	26.07% (140)
Physiological complex	4.61% (61)	6.16% (73)	32.27% (355)	17.03% (155)	10.43% (88)	15.46% (83)
Other NIC Domains	4.15% (55)	8.43% (100)	15.73% (173)	6.59% (60)	3.20% (27)	10.43% (56)
Total	100.0% (1324)	100.0% (1186)	100.0% (1100)	100.0% (910)	100.0% (844)	100.0% (537)

Source: Prepared by authors based on analyzed database records

These findings, in addition to showing correspondence between NANDA diagnoses, NOC expected outcomes and NIC interventions, allow the design of partially standardized care plans for the nursing care of women during pregnancy, childbirth and the postpartum period.

DISCUSSION

The interaction profile in the use of the standardized NANDA-NOC-NIC language allowed for a broad and precise view of the components of maternal primary health care (PHC) that are prioritized during the training of nurses at the participating institution. The relevant taxonomic domains encompassed six elements of health systems based on renewed PHC¹, applied in this case to the maternal-perinatal area. These are:

Training human resources integrating PHC into maternal health. Nursing training practices prioritize health promotion and comprehensive care of women's sexual and reproductive health experiences in all their phases. This is reflected in the diversity of diagnoses formulated and interventions carried out.

Comprehensive care for women in their reproductive years. In all relevant diagnoses and interventions, components of promotion, prevention, diagnosis, care, and support were observed to meet health needs from the preconception stage through pregnancy, childbirth, and postpartum, as well as education in healthy habits and culturally appropriate care with a strong humanistic and social focus.

- Family and community orientation. This is expressed in the formulation of diagnoses, expected outcomes, and interventions geared toward health knowledge and behavior, and quality of life, with interventions prioritized in the behavioral and family domains.
- Emphasis on promotion and prevention. This is evident through health education for the mother-child dyad, timely risk detection, and counseling for women to promote health-promoting behaviors.

- Appropriate care. This is evidenced by the coherence of the care process, which seeks to meet the needs felt by the mother, child, and family. This differs from what was reported by Carreño et al.⁽²³⁾, here mental health impacts are not relevant, nor are contradictions found between cultural models of motherhood and child-rearing.
- Health Risk Management: The findings on prevalent diagnoses are consistent with those described by Fernández et al.⁽²⁴⁾, highlighting ineffective self-management of health, the tendency to adopt health-risk behaviors, and a sedentary lifestyle. Within this component, interventions in health education and management are prioritized, mainly regarding breastfeeding and self-care; during childbirth, psychosocial support for pain and anxiety management is emphasized. The importance of interventions aimed at strengthening mothers' commitment to managing their own health, risk prevention, direct care, safety, comfort, and nutrition for the mother-child dyad is evident.

The relevant NOC domains establish goals aimed at promoting health-generating behaviors and lifestyle habits to improve quality of life. Interventions in the NIC domains focus on three fundamental aspects: education and counseling to prevent and manage risks inherent to the health of mother and child from gestation to birth, the promotion of healthy lifestyle habits with an emphasis on breastfeeding and maternal nutrition, and comprehensive care during hospitalization. Pereira et al.⁽²⁹⁾ support the use of the NIC taxonomy and, specifically regarding "Breastfeeding Counseling," consider it highly useful for strengthening this health-generating behavior with family and community participation.

In accordance with the constitutional mandate that declares the improvement of quality of life and general well-being as the goal of the Colombian State, involving all social sectors⁽²⁵⁾, this study reaffirms that professional nursing training responds to the needs of the environment. The selection of the population served during professional training, primarily from low-income backgrounds and peripheral areas or municipalities far from the capital, reaffirms the social commitment of the University and the Nursing Program to vulnerable populations. Decentralized care is prioritized as a mechanism to guarantee greater accessibility and coverage of healthcare; this is a fundamental component of Primary Health Care and an important contribution to national development projects⁽²⁶⁾. As observed in other studies^(27,28), in the Physiological Domain, interventions predominated involving medication administration, pain assessment and management, fluid management, monitoring of clinical signs, management of hemodynamic dysfunctions, and attention to everyday and critical situations within the clinical context of mother-child care from pregnancy to the postpartum period. In the Family Domain, coinciding with the findings of Pereira et al. ⁽²⁹⁾, breastfeeding counseling and newborn care were prioritized.

Although some authors reveal difficulties in implementing the NNN taxonomy in primary health care (PHC) practice and consider it of little use for demonstrating outcomes^(18,19), it is important to recognize that maternal and perinatal health is one of the areas where the standardization of some general care practices is most easily facilitated, as stated in some studies conducted in Latin America⁽⁶⁾, and this work provides guidance in this regard. Successful performance in PHC involves strengthening nursing professional training through interdisciplinary and intersectoral communication, intercultural competencies, soft skills, and the use of new technologies⁽³⁾. Similarly, Herrera et al.⁽³⁰⁾

states that nurses play a fundamental role in PHC; their interventions support risk reduction, improved adherence to treatments, and the empowerment of communities through organizational and educational processes. In this regard, Bastidas et al.⁽³¹⁾ recommends promoting the use of ICTs, music therapy, and video clips, as well as evaluating the effectiveness of interventions as preventive strategies in maternal and perinatal health.

The information recorded by the students shows significant differences stemming from their level of commitment and expertise in using standardized language, which limits the completeness of the records.

The population served consisted of women; by not involving partners and families, the possibility of assessing family interactions and opportunities for specific interventions in couple relationships and family health was reduced.

The software used, being designed to record the nursing process, has limitations regarding contextual variables specific to maternal primary health care, leading to deductions derived exclusively from the records of diagnoses and interventions performed. The data analyzed comes from training practices, which limit the generalizability of the results to real-world professional settings.

Consistent with the findings of Herrera et al.⁽³⁰⁾, nursing has a significant impact on primary health care, particularly in maternal and perinatal health, thanks to the nurse-patient relationship and the ability to respond effectively to needs during direct care of the mother-child dyad. In this context, the use of standardized language is highly beneficial for implementing evidence-based practices that strengthen access to and quality of care.

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CONCLUSIONS

By highlighting the primary health care (PHC) components prioritized during maternal-perinatal nursing practicums, coherent training processes were evident, aligned with public health promotion and prevention policies and with the real needs of the populations, promoting ethical and reflective practice focused on the comprehensive and integrated care of families and their communities.

In the context of outpatient practicums, diagnoses from Domain 1: “Health Promotion” were found to be more frequent, while in hospital practicums, diagnoses from Domain 8: “Sexuality” predominated, mainly in relation to reproduction.

The integration of PHC into nursing training is visible through practices such as health education, comprehensive care for the mother-child dyad, and maternal-perinatal risk management. The program emphasizes education and comprehensive care in breastfeeding, self-care support, nutritional counseling, psychosocial support, and timely risk identification, from preconception care to postpartum checkups and family planning counseling.

The use of standardized NANDA, NOC, and NIC terminology, focusing on the links between Domains and Classes of each taxonomy, facilitates its adoption in maternal Primary Health Care settings. This aims to improve the quality of care, systematize the nursing process, ensure timely assessment and intervention, and guarantee continuity of care for the mother-child dyad. Considering the relevant NIC Domains, the Classes with the highest frequency of interventions were gestational care, coping support, health education, nutritional support, and medication management. The correct use of standardized language during nursing education is reflected in integrated practice settings, incorporating fundamental elements of maternal primary health care to improve the quality of care, manage risk, and strengthen academic training. It is highly beneficial for educational institutions because it reflects the social responsibility of academia by demonstrating evidence-based results and fostering measurable professional performance, with transformative impacts on maternal health indicators and improved community well-being. This usage positions nurses as essential actors in health promotion, disease prevention, early identification, and timely treatment of maternal and perinatal complications.

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