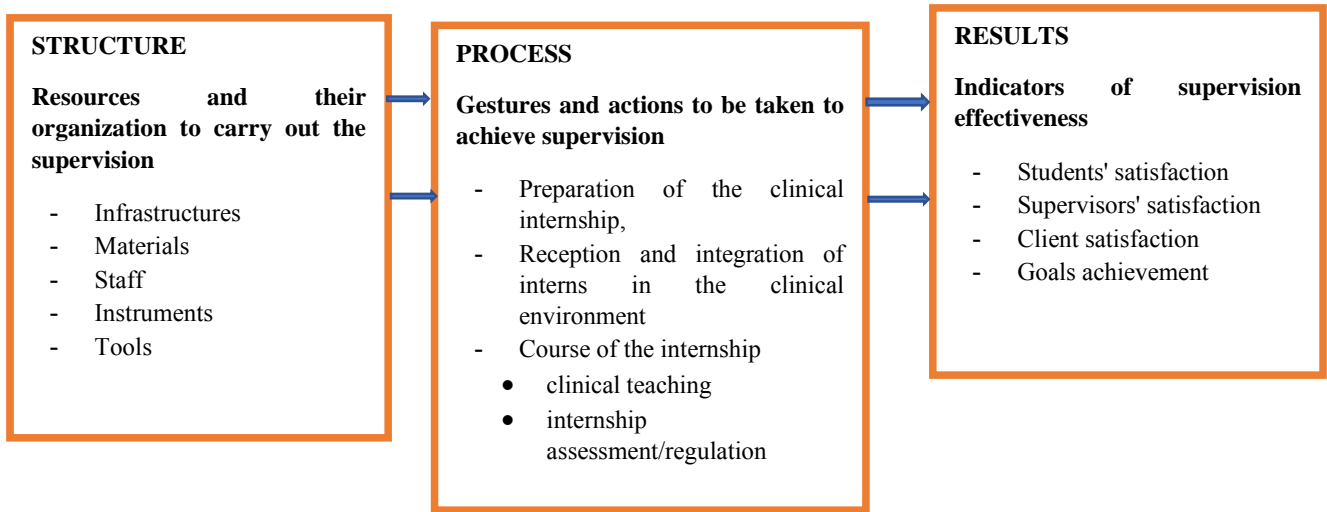


Appendix 1: Schematic representation of the study's framework (structure, process, and outcome variables): adapted Donabedian^[40] service quality model.



Appendix 2 : Search equations by database

2.1. PubMeb

("Nursing trainees" OR "Midwifery trainees" OR "Student, Nursing"[MeSH] OR "Health educators"[MeSH] OR "Internship mentors" OR "Nursing supervisor" OR "Midwifery supervisors" OR "Internship tutor" OR "Internship supervisor" OR "Monitor" OR "Supervisor" OR "Clinical supervisor" OR "Obstetric care supervisor" OR "Nursing supervisor" OR "Obstetrical student" OR "Student midwifery" OR "Nursing students" OR "Undergraduate nursing students" OR "Midwifery students" OR "Postgraduate nursing students") OR "Undergraduate Midwifery students" OR "Postgraduate midwifery students" OR "Schools, Nursing" [MeSH] OR "Faculty, Nursing" [MeSH] OR "Training institutions for nurses and midwives" OR "Midwifery training schools" OR "Nursing and midwifery training schools") OR "Hospitals"[MeSH] OR "Health"[MeSH] OR "Health center") AND ("Organization and administration"[MeSH] OR "Management" OR "Process" OR "Monitoring"[MeSH] OR "Preceptorship"[MeSH] OR "Clinical supervision" OR "Accompaniment" OR "Tutoring" OR "Supervision" OR "Clinical internship" OR "Coaching practices" OR "Clinical internship" OR "Clinical educational support" OR "Clinical pedagogical supervision" OR "Clinical teaching" OR "Nursing training" OR "Nursing and midwifery sciences" OR "Midwifery science" OR "Nursing science") AND ("Academic success"[MeSH] OR "Perception"[MeSH] OR "Quality" OR "Personal satisfaction"[MeSH] OR "Evaluation"[MeSH] OR "Equipment and supplies"[MeSH] OR "Instrumentation"[MeSH] OR "Preparation"[MeSH] OR "Skill competence" OR "Objectives achievement" OR "Educational measurement"[MeSH] OR "Infrastructure" OR "Internship tools") AND ("Africa south of the sahara"[MeSH] OR Sub-Saharan Africa OR "Benin"[MeSH]))

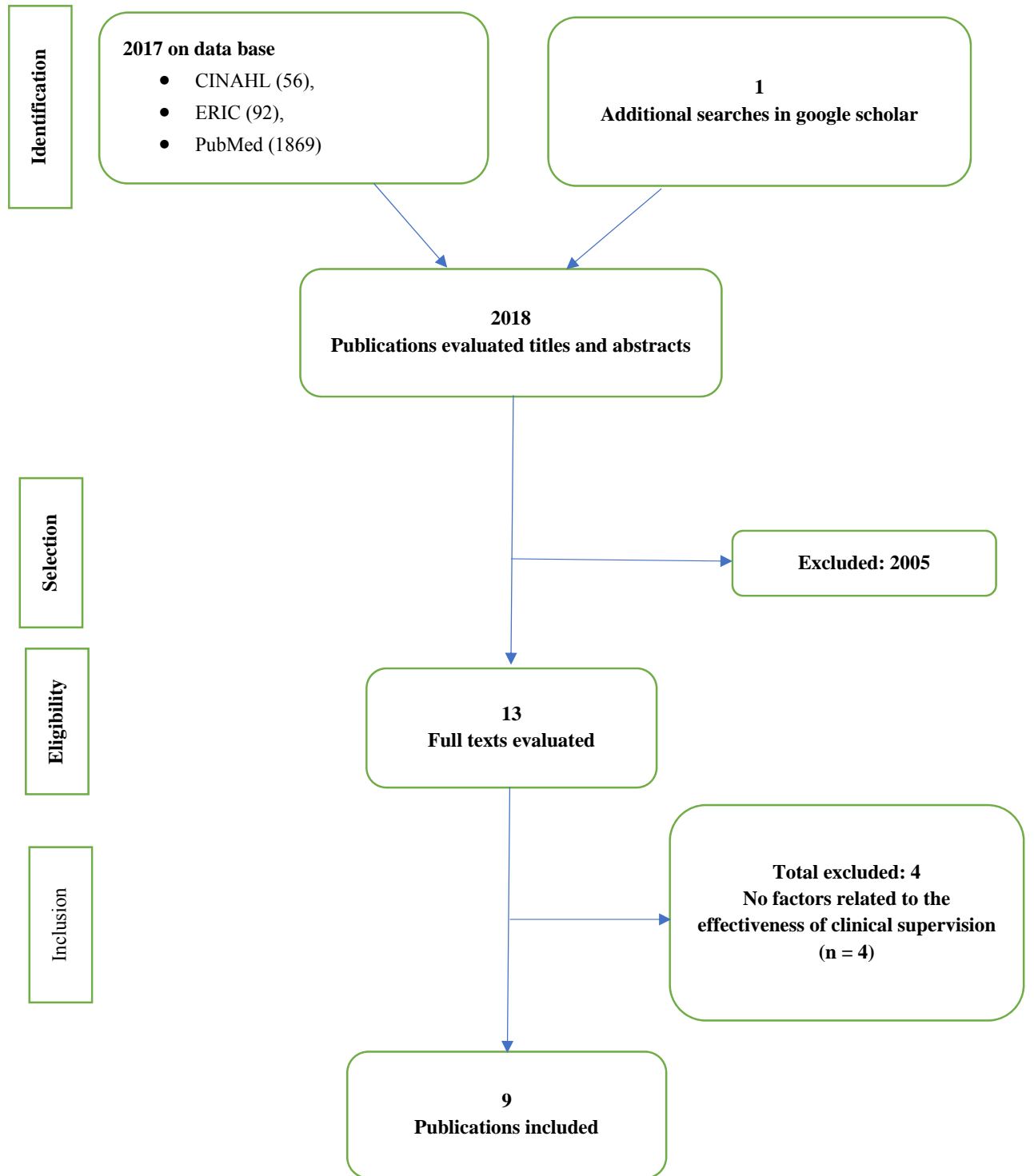
2.2. CINAHL

((MH "Professional Practice") OR (MH "Mentorship") OR (MH "Health Educators") OR (MH "Student, Nursing") OR (MH "Students, Midwifery") OR (MH "Students, Nurse Midwifery") OR (TI "Internship Mentors") OR (AB "Internship Mentors") OR (MH "Schools, Nursing") OR (MH "Faculty, Nursing") OR (TI "Training institutions for nurses and midwives") OR (AB "Training institutions for nurses and midwives") OR (TI "Nursing and midwifery training schools") OR (AB "Nursing and midwifery training schools")) AND ((MH "Clinical Supervision") OR (MH "Management") OR (MH "Teaching Methods, Clinical") OR (MH "Preceptorship") OR (MH "Nursing Science") OR (TI "Accompaniment ") OR (AB "Accompaniment") OR (TI "Tutoring") OR (AB "Tutoring") OR (TI "supervision") OR (AB "Supervision") OR (TI "monitoring") OR (AB "Monitoring") OR (TI "Clinical Internship") OR (AB "Clinical Internship") OR (TI "Coaching Practices") OR (AB "Coaching practices") OR (TI "Clinical Internship") OR (AB "Clinical Internship") OR (TI "Clinical Pedagogical Supervision") OR (AB "Clinical Pedagogical Supervision") OR (TI "Nursing Training") OR (AB "Nursing Training") OR TI "Nursing and Midwifery Sciences") OR (AB "Nursing and Midwifery Sciences") OR (TI "Midwifery Science") OR (AB "Midwifery science")) AND ((MH "Academic Achievement") OR (MH "Student Satisfaction") OR (MH "Personal Satisfaction") OR (MH "Patient Satisfaction") OR (MH "Quality Assessment") OR (MH "Quality Management, Organizational") OR (MH "Student Performance Appraisal") OR (MH "Equipment and Supplies") OR (MH "Clinical Assessment Tools") OR (MH "Clinical Exemplars") OR (TI "Infrastructure") OR (AB "Infrastructure ") OR (TI "Clinical Cases") OR (AB "Clinical Cases")) AND (MH "Africa South of the Sahara")))

2.3. ERIC

("Supervisors" OR "Supervisor Training" OR "Nursing Student" OR "Internship Mentors" OR "Nursing Supervisor" OR "Internship Tutor" OR "Internship Supervisor" OR "Monitor" OR "Clinical Supervisor" OR "Obstetric Care Supervisor" OR "Nursing Supervisor" OR "Obstetrical Student" OR "Midwifery Student") AND ("Clinical Supervision" OR "Tutoring" OR "Clinical Teaching" OR "Preceptorship" OR "Clinical Practical Placement" OR "Supervision" OR "Monitoring" OR "Coaching Practices" OR "Clinical Internship" OR "Practical Training" OR "Management" OR "Clinical Pedagogical Supervision" OR "Nursing Training" OR "Dual Education" OR "Nursing and Midwifery Sciences" OR "Midwifery Science") AND ("Academic Success" OR "Student Satisfaction" OR "Educational Quality" OR "Teacher Quality" OR "Diagnostic Self Evaluation" OR "Formative Evaluation" OR "Evaluation Methods" OR "Educational Equipment" OR "Administrator Preparation" OR "Skill Competence" OR "Achievement of Internship Objectives" OR "Institutional and Organizational Capacity" OR "Infrastructure" OR "Clinical Cases")

Appendix 3: Flow chart



Appendix 4: Characteristics of excluded studies: studies and reason for exclusion

Studies	Reason for exclusion
Ageyi-Baffour, P., Rominski, S., Nakua, E., Gyakobo, M., & Lori, J. R. (2013). Factors that influence midwifery students in Ghana when deciding where to practice: A discrete choice experiment. <i>BMC Medical Education</i> , 13, 64. https://doi.org/10.1186/1472-6920-13-64	Results not related to factors of effectiveness of clinical pedagogical supervision but rather on the motivation for choice of location
Chinkhata, M. M., & Langley, G. (2018). Experiences of Male Student Nurse Midwives in Malawi During Undergraduate Education. <i>Annals of Global Health</i> , 84(1), 83-90. https://doi.org/10.29024/aogh.18	Results not related to factors of effectiveness of clinical pedagogical supervision but gender and integration of Malawian student midwives into nursing as a female function
Musafiri, J. J., & Daniels, F. (2020). Nursing students' perceptions of clinical learning opportunities and competence in administration of oral medication in the Western Cape. <i>Curationis</i> , 43(1), e1-e9. https://doi.org/10.4102/curationis.v43i1.2044	Results not related to factors of effectiveness of clinical pedagogical supervision but on learning opportunities to practice oral medication administration
Phafoli, S. H., Christensen-Majid, A., Skolnik, L., Reinhardt, S., Nyangu, I., Whalen, M., & Stender, S. C. (2018). Student and preceptor perceptions of primary health care clinical placements during pre-service education: Qualitative results from a quasi-experimental study. <i>Nurse Education in Practice</i> , 28, 224-230. https://doi.org/10.1016/j.nepr.2017.10.012	Results not related to factors of effectiveness of clinical pedagogical supervision but on the benefits of a primary health care internship

Appendix 5: Characteristics of included studies

Reference (short)	Country	Aim of the study	Study population and sample	Study site	Study design	Study duration	Data collection methods and tools	Results
								Classified by barriers and facilitators according to the structure and process of clinical pedagogical supervision
Mbakaya (2020) ^[18]	Malawi	To assess the experiences and perception of nursing and midwifery students of their clinical learning environment in Malawi.	Nursing and Midwifery students (n = 126)	Nursing and midwifery training institutions	Mixed-method	Not defined	<ul style="list-style-type: none"> - Focus group discussion and Survey - Focus group interview guide and Self-administered questionnaire 	<p>A. STRUCTURE</p> <p>1. Barriers</p> <ul style="list-style-type: none"> - Lack of human resources: insufficiently qualified personnel in the clinical sector - Lack of clinical and protective equipment - Insufficient number of patients - Increased number of students <p>B. PROCESS</p> <p>1. Barriers</p> <ul style="list-style-type: none"> - Lack of support for students in the clinical area - Inadequate student supervision - Unavailability of lecturers in the clinical area - Non-compliance with standards and guidelines - Poor relationship with qualified nurses - Evaluations and feedback to students not completed on time
Kamphinda et al. (2019) ^[33]	Malawi	To explore and describe clinical supervision from the students' perspectives on the features of their actual and preferred clinical learning environment	Undergraduate nursing students (n = 129)	Kamuzu College of Nursing in Lilongwe District in the central region of Malawi	Mixed method	One (1) month	<ul style="list-style-type: none"> - Interview and Survey - Interview guide and Structured questionnaire 	<p>A. STRUCTURE</p> <p>1. Barriers</p> <ul style="list-style-type: none"> - Lack of supervision policies - Insufficient clinical staff (clinical nurses) - Lack of referring teachers/internship site supervisors at the internship sites - Supervisors (nurses) are not motivated to teach students - Lack of material resources - Inadequate material resources - Inadequate practicum period

								<ul style="list-style-type: none"> - Insufficient time allocated to the practicum <p>2. Facilitators</p> <ul style="list-style-type: none"> - Sufficient number of patients with a variety of health problems <p>B. PROCESS</p> <p>1. Barriers</p> <ul style="list-style-type: none"> - Lack of supervision and daily support for the trainee - No help when needed - Insufficient visits by nurse educators - Failure to meet placement objectives/exploitation of trainees for other purposes - Lack of feedback, personal supervision - Poor relationship between nurses and students
Kaphagawani & al. (2018) ^[37]	Malawi	To explore how the pre-registration nursing students find their experience on clinical supervision in the clinical placements	Nursing students (n = 734)	Nursing colleges	Mixed method	October 2013 to July 2014	<ul style="list-style-type: none"> - Focus group discussion and Structured questionnaire - Focus groups and Self-administered questionnaire 	<p>A. STRUCTURE</p> <p>1. Barriers</p> <ul style="list-style-type: none"> - Lack of human resources - Lack of learning support - Availability of instructors - Clinical supervisors not recognized in terms of missions and role (job insecurity) - Lack of nurse educators - The high number of students in clinics <p>2. Facilitators</p> <ul style="list-style-type: none"> - Presence of clinical coaches role models <p>B. PROCESS</p> <p>1. Barriers</p> <ul style="list-style-type: none"> - Lack of supervision and daily support for the trainee - No help when needed - Lack of assessment of the trainee's needs and skills
Mubeezi	Uganda	To investigate how	Qualified	Hospital of the	Qualitative	Not	- Interview	A. STRUCTURE

(2017) ^[38]		mentors perceived their own knowledge and skills of supporting students during clinical practice and to identify their learning needs to inform the development of a mentor curriculum	practicing nurses and midwives, registered with the Uganda Nurses and Midwives Council (n = 5)	south-western districts		defined	open-ended, semi-structured - Entretiens approfondis, semi-structurés et ouverts	1. Barriers <ul style="list-style-type: none"> - Insufficient equipment and clinical instruments - Low staffing levels with high workloads) - Lack of official recognition of mentors - Lack of training in supervision (pedagogical and technical) - Lack of motivation of mentors (unpaid mentoring) - Insufficient duration of the course - Lack of teaching and learning tools B. PROCESS 1. Barriers <ul style="list-style-type: none"> ❖ Preparation of the internship <ul style="list-style-type: none"> - Insufficient preparation of the students: insufficient practical and theoretical knowledge ❖ The course of the internship <ul style="list-style-type: none"> - Lack of supervision of the students - Lack of interest in the internship on the part of the students
Vuso (2017) ^[34]	South Africa	To explore the perceptions of midwifery educators regarding the effects of limited standardisation of midwifery clinical education and practice on clinical preparedness of midwifery students	Midwifery nurse educators (n = 17)	Nursing college in the Eastern Cape,	Qualitative	June - August 2014	<ul style="list-style-type: none"> - Focus-group interviews - Main question with an additional interview guide 	A. STRUCTURE 1. Barriers <ul style="list-style-type: none"> - Lack of clinical supervision policies and standards: no guidelines or appropriate policy - No clinical department with its own staff - Lack of student competency frameworks (mentored) - Non-standard and effective summative evaluation tools - Insufficient supervisory skills (midwife clinicians: young, no experience) - Lack of student competency framework (supervised) - Insufficient programming of the internship: insufficient duration B. PROCESS 1. Barriers <ul style="list-style-type: none"> - Lack of communication between theory teachers and the

								<p>clinical department</p> <ul style="list-style-type: none"> - Lack of use of standardized coaching tools (inconsistencies in clinical teaching and practice between midwifery educators and clinical midwives as well as assessment processes) - Conflict of competencies between supervisors
OTTI et al. (2015a) ^[12]	Benin	To identify INMeS students' perceptions of the management process and quality of their clinical pedagogical supervision in nursing and obstetrics	Nursing and Obstetrics Students (n=127)	Institut national médico-sanitaire (INMeS)	Mixed method	July 2013	<ul style="list-style-type: none"> - Survey by questionnaire - Self-administered questionnaire 	<p>A. STRUCTURE</p> <p>1. Barriers</p> <ul style="list-style-type: none"> - Lack of interest of the health care team in clinical supervision - Lack of equipment - Lack of staff room - Insufficient duration of the internship - Inadequate timing of the internship <p>B. PROCESS</p> <p>1. Barriers</p> <p>❖ Preparation of the internship</p> <ul style="list-style-type: none"> - Lack of health insurance policy protection for trainees, - Insufficient organization of clinical simulations (lack of mastery of care techniques by trainees) - Failure to hold preparatory meetings with the students at the training institution by the teacher in charge of the internship - Failure of the training supervisor to hold preparatory meetings with the different actors in each department - Absence of training teachers on the placement sites <p>❖ Reception and integration of trainees in care settings</p> <ul style="list-style-type: none"> - No accompaniment of students by the permanent teacher of the training institution/placement site referent - No presentation of departmental staff to students - No presentation of students to staff - No review and clarification of placement objectives - No presentation of evaluation criteria to students

							<ul style="list-style-type: none"> - No presentation of the organization and functioning of the service to the students - No presentation of the practical details of the placement ❖ The course of the internship - Lack of daily support for the trainee - No help when needed - Insufficient visits by nurse educators - The exploitation of trainees for other purposes - Summative evaluation of students in their absence - Non-application of human skills by the supervisors 2. Facilitators - Organizational reception of students by the supervisor - Interest in the internship by the students
OTTI et al (2015b) ^[19]	Benin	To identify the perception of the supervisors of INMeS students in service at the Centre national hospitalier et universitaire (CNHU) and the Hôpital de la mère et de l'enfant lagune (HOMEL) in Cotonou, Benin, of the management process and the quality of the clinical pedagogical supervision in nursing and	Supervisors of INMeS students' internships (n=125)	Centre national hospitalier et universitaire (CNHU) and the Hôpital de la mère et de l'enfant lagune (HOMEL) of Cotonou in Benin	Mixed method	15 days	<ul style="list-style-type: none"> - Survey by questionnaire - Self-administered questionnaire <p>A. STRUCTURE</p> <p>1. Barriers</p> <ul style="list-style-type: none"> - Lack of a formal and regulatory framework for the organization of supervision - Lack of staff rooms - Lack of supervision equipment at the training site - Lack of involvement of course supervisors in the development of course tools (course objectives, course booklet) - Lack of welcome booklet and skills evaluation guide - Inadequacy of the internship logbook, skills evaluation criteria grid - Internship of too short a duration and inappropriate period - No official recognition of the status of internship supervisor - Lack of pedagogical supervision skills - Lack of training for supervisors in the clinical supervision of supervisors and in the nursing skills and training framework - Lack of vocation and willingness of students

		obstetrics						<p>2. Facilitators</p> <ul style="list-style-type: none"> - Existence of an internship logbook and a skills evaluation criteria grid <p>B. PROCESS</p> <p>1. Barriers</p> <ul style="list-style-type: none"> ❖ Preparation of the internship - No involvement of supervisors in the realization of clinical simulations - Insufficient communication on the organization of the internship between the training institute and the internship site - Insufficient preparation of students for the internship (insufficient theoretical and practical skills) ❖ Reception and integration of trainees in care settings - No clarification of the course objectives - No presentation of how the course will be conducted ❖ Course of the internship - Insufficient use of internship tools (difficulties in using the internship logbook) - Lack of follow-up of the trainees by the trainees' supervisors and the permanent teachers of INMeS - Lack of effective involvement of students in their own clinical supervision
Rikhotso (2014) ^[36]	South Africa	To explore and describe the perceptions of nursing students about clinical guidance and support at the rural hospital, and to suggest guidelines	Nursing students rural (n = 23)	Training college in Limpopo Province	Qualitative,		<ul style="list-style-type: none"> - Focus group interviews - One central question <p>A. STRUCTURE</p> <p>1. Barriers</p> <ul style="list-style-type: none"> - Obsolete, insufficient and defective medical and nursing equipment - Lack of personnel <p>B. PROCESS</p> <p>1. Barriers</p> <ul style="list-style-type: none"> - Reception and integration of trainees in care settings - Ineffective clinical orientation of tutors 	

		for clinical guidance and support of nursing students						<ul style="list-style-type: none"> - Course of the internship - Ineffective clinical support from tutors - Inability of the trainee to get help when needed - Lack of organization of clinical learning activities - Lack of follow-up supervision of trainees - Non-application of human skills by professional nurses: disrespectful, mean, aggressive and ethnocentric behavior (inequity in treatment of trainees based on race and language) - Students: disrespectful to professional nurses
Eta & al (2011) ^[35]	Cameroon	To describe the major challenges faced by clinical nurse educators (CNEs)	Clinical nurse educators (n = 72)	Ekondo Titi, Buea and Limbe Health Districts in the Ndiang and Fako Division of the South West Region of Cameroon	Mixed method		<ul style="list-style-type: none"> - Questionnaires made up of both open and closed-ended questions - Self-administered questionnaire 	<p>A. STRUCTURE</p> <p>1. Barriers</p> <ul style="list-style-type: none"> - Poor health policies - Lack of equipment and tools - Outdated educator knowledge - Lack of updating of educators' skills - Low staffing levels, high workload - Lack of motivation of supervisors: unpaid staff, lack of preparation of staff for clinical teaching <p>B. PROCESS</p> <p>1. Barriers</p> <ul style="list-style-type: none"> ❖ Preparation of the internship - Insufficient duration of the course and high number of trainees - Insufficient basic knowledge and skills ❖ Course of the internship - Bad behavior of the students: lack of respect for the staff and lack of interest in the internship

Appendix 6: Distribution of studies by barriers and facilitators of clinical pedagogical supervision identified according to the factors

FACTORS	STUDIES	
	Barriers	Facilitators
A. STRUCTURE	[12,18,19,33-38] (n = 9)	[19,33,37] (n = 3)
I. At the level of the two institutions: educational institutions and clinical internship sites: Instruments for regulating relations between the nursing educational institution and the clinical internship sites	[19,33,34] (n = 2)	-
1. Internship policies and standards for supervision of interns	[33,34] (n = 2)	-
2. Partnership convention or affiliation contract between the training institution and the internship environment	[19] (n = 1)	-
3. Internship convention between the training institution, the trainee and the internship sites	[19,33] (n = 2)	-
4. Reception and clinical supervision charter elaborated in partnership between the training institution, the trainee and the internship environment	[19] (n = 1)	-
5. Standard and validated coaching and learning tools	[19,34] (n = 2)	-
6. Student competency referential	[34] (n = 1)	-
II. At the level of the educational institutions	[19,33-35,36] (n = 5)	[37] (n = 1)
1. Infrastructure: the existence of a clinical department with its staff	[34] (n = 1)	-
2. Staff: interest of teachers in the internship	[33] (n = 1)	[37] (n = 1)
3. Students: vocation and willingness of students	[19,35,36] (n = 3)	-
III. At the level of the clinical internship sites	[12,18,19,33-36,38] (n = 8)	[19] (n = 1)
1. Infrastructure: the existence of a nursing staff room in each internship department for exchanges and analysis of professional practices	[12,34] (n = 2)	-
2. Materials: the existence of sufficient clinical supervision materials (equipment and instruments) for the organization of learning situations for the benefit of trainees	[12,18,19,33-36,38] (n = 8)	-
3. Tools: Existence of practical guides for supervision	-	[19] (n = 1)
4. Staff	[12,18,19,33-38] (n = 9)	[33] (n = 1)
4.1. For each internship environment, the existence of supervision actors (of masters, tutors, internship proximity professionals) known in terms of roles, responsibilities and mission	[19,33,34,37] (n = 4)	-
4.2. Présence de professionnels de santé qualifiés au regard des disciplines exercée	[12,18,19,37] (n = 4)	[33] (n = 1)
4.3. Presence of qualified and competent internship supervisors (human, pedagogical, technical and professional nursing skills)	[18,19,33-37] (n = 6)	-
4.4. Availability of supervisors (number of staff)	[18,33-35] (n = 4)	-
4.5. Motivation of the health care team to supervise students	[12,18,33,35,37,38] (n = 6)	-
5. Clinical cases	[12,18] (n = 2)	[33] (n = 1)
5.1. Numbers	[12,18] (n = 2)	[33] (n = 1)
5.2. Pathologies most encountered in the internship environment related to internship objectives	-	[33] (n = 1)

6. Professional activities package: the existence of professional activities in the department allowing real learning for the student to achieve the internship objectives	[33] (n = 1)	-
B. PROCESS	[12,18,19,33-38] (n = 9)	[12,18,33] (n = 3)
I. Preparation of the clinical internship	[12,18,19,33-36,38] (n = 8)	[12] (n = 1)
1. Selection of internship sites and respect for the criteria for assigning students to an internship environment	[12,18,19,33-36,38] (n = 8)	-
2. Provision of sufficient clinical supervision materials (equipment and instruments) to the internship environments for the organization of learning situations for the benefit of interns	[19,38] (n = 2)	-
3. Educational training in the clinical pedagogical supervision approach for those involved in supervision	[35] (n = 1)	-
4. Organization of clinical simulations in educational institutions, assimilation of techniques and involvement of supervisors	[12,19,34,35,38] (n = 5)	-
5. Programming of the internship	[12,18,19,34-38] (n = 8)	-
5.1. Number of trainees per site	[18,35,36] (n = 3)	-
5.2. Length of the internship	[12,19,34,35,37,38] (n = 6)	-
5.3. Moment of the internship	[12] (n = 1)	-
5.4. Period of the internship	[19,37] (n = 2)	-
6. Realization of the preparatory meeting of the internship with the students by the teacher referent of the internship site	[12,19,35] (n = 3)	[12] (n = 1)
6.1. Explanation of objectives	[12,35] (n = 2)	-
6.2. Explanation of how the internship works	[12,35] (n = 2)	-
6.3. Information about the internship environment	[12,35] (n = 2)	-
6.4. Providing students with internship tools	-	[12] (n = 1)
6.5. Explanation of internship tools	[12] (n = 1)	-
7. Preparation of the clinical internship by the student himself	[12,35] (n = 2)	-
8. Preparatory meeting of the clinical supervision with the different actors in each department by the internship master	[12,19] (n = 2)	-
II. Reception and integration of interns in the clinical environment	[12,18,19,36,37] (n = 5)	[12] (n = 1)
1. Organizational reception of the students by the internship master	[36] (n = 1)	[12] (n = 1)
2. Realization of a reception interview	[12,18,19,36,37] (n = 5)	-
2.1. Accompaniment of students by the educational institution's teacher (internship site referent)	[12,18,37] (n = 3)	-
2.2. Presentation of the service staff to the students	[12] (n = 1)	-
2.3. Presentation of the students to the staff	[12,36] (n = 2)	-
2.4. Rereading and clarification of internship objectives	[12,19,36] (n = 3)	-
2.5. Presentation of the criteria and evaluation modalities of the internship	[12,19,36] (n = 3)	-
2.6. Presentation of the organization and functioning of the service to students	[12,36] (n = 2)	-
2.7. Presentation of the practical modalities of the internship	[12,19,36] (n = 3)	-
3. Pedagogical reception of the students by the internship tutor	[12,36] (n = 2)	-
III. Course of the internship	[12,18,19,33-38] (n = 9)	[12,18,33] (n = 3)

a) Clinical teaching	[12,18,19,33,35-38] (n = 8)	[12,18,33] (n = 3)
1. Application of clinical supervision skills by supervisors: Supervisor-student pedagogical communication relationships	[12,18,33,36,37] (n = 5)	[33] (n= 1)
1.1. Managerial/organizational skills	[12,33,36,37] (n = 4)	-
• Organization of learning activities	[12,33,36,37] (n = 4)	-
1.2. Human or relational skills	[12,33,36,37] (n = 4)	-
• Establishment of a climate of trust	[12,33,36,37] (n = 4)	-
• "Manifestation of an empathetic attitude"	[12,33,36] (n = 3)	-
• Use of personal qualities	[12,33,36,37] (n = 4)	-
1.3. Pedagogical and didactic skills	[12,18,38,37] (n = 4)	[33] (n = 1)
• Respect of the internship objectives	-	[33] (n = 1)
• Assessment of the student's needs and skills	[12,18,33,37] (n = 4)	-
1.4. Clinical/technical skills	[12,18,33] (n = 3)	-
• Expression of expertise in demonstrating and evaluating care techniques	[12,18,33] (n = 3)	-
2. Student Behavior: Effective student involvement in their own clinical supervision and evaluation of learning	[19,35,36,38] (n = 4)	[12,18] (n = 2)
2.1. Integration of a constructive learning approach	[19,38] (n = 2)	[18] (n = 1)
2.2. Questioning	[19,38] (n = 2)	-
2.3. Interest in the internship	[19,35,38] (n = 3)	[12] (n = 1)
2.4. Assiduity to the internship	[19] (n = 1)	-
2.5. Punctuality at the internship	[19,35] (n = 2)	-
2.6. Respect for the supervisors	[19,35,36,38] (n = 4)	-
2.7. Respect and assistance to other students	[19] (n = 1)	[18] (n = 1)
2.8. Respect for the organization and course of the internship	[19,35,36,38] (n = 4)	-
b) Internship assessment/regulation	[12,18,19,33,34,36-38] (n = 8)	-
1. Monitoring/supervision of the internship by the permanent teachers of the educational institutions	[18,19,33,37,38] (n = 5)	-
2. Continuous formative evaluation of learning by proximity professionals	[12,19,33,36-38] (n = 6)	-
2.1. Objective observations of trainees' practices	[19,36-38] (n = 4)	-
2.2. Formulation of effective feedback meaningful and constructive feedback	[12,33,36,37] (n = 4)	-
3. Summative learning assessment	[12,18,19,34] (n = 4)	-
3.1. Use of validated standard supervision and learning tools	[19,34] (n = 2)	-
3.2. Direct observation of the trainee's practices	[12] (n = 1)	-
3.3. Respect of the directives and standards	[18] (n = 1)	-
ALL OF THE FACTORS	[12,18,19,33-38] (n = 9)	[12,18,19,33,34,37] (n = 6)

Appendix 7 : Quality assessment results

STUDIES	METHODOLOGICAL QUALITY CRITERIA											
	Screening questions (for all types)		1. Qualitative					5. Mixed methods				
	P1	P2	1.1.	1.2.	1.3.	1.4.	1.5.	5.1.	5.2.	5.3.	5.4.	5.5.
Eta & al. (2011)	+	+						+	+	+	+	+
Kamphinda & Chilemba (2019)	+	+						+	+	+	+	+
Kaphagawani & Useh (2018)	+	+						+	+	+	+	+
Mbakaya & al. (2020)	+	+						+	+	+	+	+
Mubeezi & Gidman (2017)	+	+	+	+	+	+	+					
Otti & al. (2015a)	+	+						+	+	+	+	+
Otti & al. (2015b)	+	+						+	+	+	+	+
Rikhotso & al. (2014)	+	+	+	+	+	+	+					
Vuso & James (2017)	+	+	+	+	+	+	+					

Legend

CATEGORY OF STUDY DESIGNS	METHODOLOGICAL QUALITY CRITERIA	RESPONSES			
		Yes = +	No = -	Can't tell = *	Comments
Screening questions (for all types)	S1. Are there clear research questions?				
	S2. Do the collected data allow to address the research questions?				
	<i>Further appraisal may not be feasible or appropriate when the answer is 'No' or 'Can't tell' to one or both screening questions.</i>				
1. Qualitative	1.1. Is the qualitative approach appropriate to answer the research question?				
	1.2. Are the qualitative data collection methods adequate to address the research question?				
	1.3. Are the findings adequately derived from the data?				
	1.4. Is the interpretation of results sufficiently substantiated by data?				
	1.5. Is there coherence between qualitative data sources, collection, analysis and interpretation?				
5. Mixed methods	5.1. Is there an adequate rationale for using a mixed methods design to address the research question?				
	5.2. Are the different components of the study effectively integrated to answer the research question?				
	5.3. Are the outputs of the integration of				

	qualitative and quantitative components adequately interpreted?				
	5.4. Are divergences and inconsistencies between quantitative and qualitative results adequately addressed?				
	5.5. Do the different components of the study adhere to the quality criteria of each tradition of the methods involved?				

Appendix 8 : rouping of factors defined in terms of weaknesses (barriers) and strengths (facilitators) of clinical pedagogical supervision according to level

BARRIERS (N= 62)	FACILITATORS
STRUCTURE LEVEL (n = 18)	PROCESS LEVEL (n = 0)
I. At the level of the two institutions: educational institutions and clinical internship sites : (Instruments for regulating relations between the nursing educational institution and the clinical internship sites) (n = 6)	I. At the level of the two institutions: educational institutions and clinical internship sites (n = 0)
<ul style="list-style-type: none"> - Internship policies and standards for supervision of interns - Partnership convention or affiliation contract between the training institution and the internship environment - Internship convention between the training institution, the trainee and the internship sites - Reception and clinical supervision charter elaborated in partnership between the training institution, the trainee and the internship environment - Standard and validated coaching and learning tools - Student competency referential 	
II. At the level of the educational institutions (n = 3)	II. At the level of the educational institutions (n = 1)
<ul style="list-style-type: none"> ❖ Infrastructure : <ul style="list-style-type: none"> - Inexistence of a clinical department with its own staff ❖ Staff <ul style="list-style-type: none"> - Lack of teacher interest in the internship* ❖ Students <ul style="list-style-type: none"> - Lack of vocation and willingness of students 	<ul style="list-style-type: none"> ❖ Infrastructure ❖ Staff <ul style="list-style-type: none"> - the interest of teachers in the internship* ❖ Students
III. At the level of the clinical internship sites (n = 9)	III. At the level of the clinical internship sites (n = 4)
<ul style="list-style-type: none"> ❖ Infrastructure <ul style="list-style-type: none"> - No nursing staff room in each internship department for exchange and analysis of professional practices ❖ Materials <ul style="list-style-type: none"> - Lack of sufficient clinical supervision materials (equipment and instruments) to organize learning situations for trainees ❖ Staff <ul style="list-style-type: none"> - Inexistence of supervision actors known in terms of roles, responsibilities and mission (masters, tutors, proximity professionals of internship) - Lack of qualified health professionals for the disciplines practised * - Lack of qualified and competent internship supervisors (human, pedagogical, technical and professional nursing skills)* - Insufficient number of supervisors - Lack of motivation of the health care team to supervise students Clinical cases <ul style="list-style-type: none"> - Insufficient clinical cases*. - Insufficient professional activity packet: lack of professional activities in 	<ul style="list-style-type: none"> ❖ Infrastructure ❖ Matériel : <ul style="list-style-type: none"> - Existence of practical supervision guides ❖ Personnel <ul style="list-style-type: none"> - Presence of qualified and competent internship supervisors (human, pedagogical, technical and professional nursing skills)* Clinical cases <ul style="list-style-type: none"> - Existence of a sufficient number of clinical cases* - Pathologies most encountered in the

the department allowing for real student learning to achieve internship objectives	internship environment related to the internship objectives
B. PROCESS (n = 44)	B. PROCESS (n = 9)
I. Preparation of the clinical internship (n = 14)	I. Preparation of the clinical internship (n = 1)
<ul style="list-style-type: none"> - Inadequacies in the selection of internship sites and respect for the criteria for assigning students to an internship environment - Failure to provide internship environments with sufficient clinical supervision materials (equipment and instruments) to organize learning situations for interns - No educational training in the clinical pedagogical supervision approach for those involved in supervision - Insufficient organization of clinical simulations in educational institutes: non-assimilation of techniques by students and involvement of supervisors ❖ Programming of the internship <ul style="list-style-type: none"> - An overwhelming number of trainees per site - Insufficient duration - Inappropriate length of the internship - Inappropriate internship period ❖ Realization of the preparatory meeting of the internship with the students by the teacher referent of the internship site <p><i>No :</i></p> <ul style="list-style-type: none"> - Explanation of objectives - Explanation of how the internship works - Informations about the internship environment - 6.5. Explanation of internship tools - Preparation of the clinical internship by the student himself - Preparatory meeting of the clinical supervision with the different actors in each department by the internship master 	<ul style="list-style-type: none"> ❖ Realization of the preparatory meeting of the internship with the students by the teacher referent of the internship site - Providing students with internship tools
II. Reception and integration of interns in the clinical environment (n = 9)	II. Reception and integration of interns in the clinical environment (n = 1)
<ul style="list-style-type: none"> - Inadequacies in the organizational reception of the students by the internship master * - Pedagogical reception of the students by the internship tutor ❖ Realization of a reception interview <p><i>No :</i></p> <ul style="list-style-type: none"> - Accompaniment of students by the educational institution's teacher (internship site referent) - Presentation of the service staff to the students - Presentation of the students to the staff - Rereading and clarification of internship objectives - Presentation of the criteria and evaluation modalities of the internship - Presentation of the organization and functioning of the service to students - Presentation of the practical modalities of the internship 	<ul style="list-style-type: none"> - Organizational reception of the students by the internship master * ❖ Realization of a reception interview
III. Course of the internship (n = 21)	III. Course of the internship (n = 7)
a) Clinical teaching (n = 15)	a) Clinical teaching (n = 7)

<p>Application of clinical supervision skills by supervisors: Supervisor-student pedagogical communication relationships (n = 7)</p> <ul style="list-style-type: none"> ❖ Managerial/organizational skills <ul style="list-style-type: none"> - Insufficient organization of learning activities ❖ Human or relational skills <ul style="list-style-type: none"> - No establishment of a climate of trust - Display of non-empathetic attitudes - Non-use of personal qualities ❖ Pedagogical and didactic skills <ul style="list-style-type: none"> - Non-respect of internship objectives * - Inadequate assessment of student needs and skills ❖ Clinical and technical skills <ul style="list-style-type: none"> - No expression of expertise in the demonstration of care techniques than in their evaluation <p>Student Behavior: Effective student involvement in their own clinical supervision and evaluation of learning (n = 8)</p> <ul style="list-style-type: none"> - Failure to integrate a constructive learning approach* - Lack of questioning - Lack of interest in the internship * - Absence from the internship - No punctuality at the internship - Lack of respect for supervisors - Lack of respect and assistance to other students * - Non-respect of the organization and course of the internship 	<p>Application of clinical supervision skills by supervisors (n = 4)</p> <ul style="list-style-type: none"> ❖ Managerial/organizational skills ❖ Human or relational skills ❖ Pedagogical and didactic skills <ul style="list-style-type: none"> - Respect of the internship objectives* ❖ Clinical and technical skills <p>Student Behavior (n = 3)</p> <ul style="list-style-type: none"> - Integration of a constructive learning approach* - Interest in the internship* - Respect and assistance to other students*
<p>b) Internship assessment/regulation (n = 6)</p>	<p>b) Internship assessment/regulation (n = 0)</p>
<ul style="list-style-type: none"> - Insufficient monitoring/supervision of the internship by the permanent teachers of the educational institutions ❖ Continuous formative evaluation of learning by proximity professionals <ul style="list-style-type: none"> - No objective observations of trainees' practices - No effective, meaningful and constructive feedback ❖ Summative learning assessment <ul style="list-style-type: none"> - No use of validated standard supervision and learning tools - No direct observation of the trainee's practices - Non-respect of directives and standards 	<ul style="list-style-type: none"> ❖ Continuous formative evaluation of learning by proximity professionals ❖ Summative learning assessment

The table shows that:

- A total of 54 factors were cited as weaknesses to clinical pedagogical supervision ;
- All the factors related to the *evaluation/regulation of the internship and to the instruments for regulating the relationship between educational institutions and clinical internship sites* were reported as weaknesses only ;
- Three (3) factors, of which two from the structure (*existence of practical supervision guides and Pathologies most encountered in the internship environment related to the internship objectives*) and one from the process (*delivery of internship tools*), were mentioned as strength only ;
- Eight (8) factors were perceived as both strengths and weaknesses.

Legend:

- *: refers to factors cited as both barrier and facilitator ;
- n: corresponds to the number of factors in the item ;
- -: indicates the factors.