

How Clinical Management Experiences Shape Professional Socialization: A Qualitative Study of Nursing Students

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Abstract

Aim

To explore nursing students' experiences of clinical management practices (CMPs) and examine how these experiences contribute to professional socialization (PS) within clinical learning environments (CLEs).

Background

PS provides the foundation for developing nursing students' professional values, identities, and role expectations. Previous research has emphasized CLEs, mentorship, and role modeling, but the contributions of exposure to CMPs and nurse manager leadership to students' PS remain underexplored. Understanding this organizational dimension of clinical learning may broaden current perspectives on professional identity development.

Methods

A qualitative descriptive study included 17 senior nursing students undertaking internship placements. Semi-structured face-to-face interviews were conducted between February and May 2026. Data were analyzed using Braun and Clarke's Reflexive Thematic Analysis. PS theory informed findings' interpretation.

Findings:

Four interconnected themes were identified: (1) structuring clinical work and management processes, (2) leadership role and style of the nurse manager, (3) system-related challenges and working conditions, and (4) PS through clinical management experiences. Participants described clinical management as an important organizational learning context where observing leadership practices, workflow coordination, decision-making, and workplace realities extended learning beyond direct patient care. These experiences fostered responsibility, belonging, role modeling, and a deeper understanding of professional nursing roles, thereby contributing to professional identity development.

Conclusions

Clinical management experiences constitute an important yet underrecognized organizational context for nursing students' PS. Exposure to nurse manager leadership, organizational processes, and workplace realities support students' understanding of professional roles and facilitates their transition from student to professional nurse.

Implications for Nursing:

Nursing education and clinical placement programs should intentionally integrate opportunities for students to observe CMPs, engage with organizational aspects of nursing care, and critically reflect on these experiences. Such strategies may strengthen PS, leadership awareness, and professional identity development.

1. Introduction

Professional socialization (PS) is a fundamental developmental process in nursing education through which students acquire the knowledge, values, attitudes, behaviors, and professional identity (PI) required for nursing practice. Beginning during nursing education and continuing throughout the transition to professional practice, this process enables students to internalize nursing profession norms and expectations and supports their development as competent and professionally engaged nurses (1, 2). Professional identity development (PID) is increasingly recognized as a dynamic and socially constructed process shaped by educational experiences, clinical contexts, and interactions within professional communities (3).

Effective PS has been associated with stronger professional commitment and confidence, a smoother transition to practice, and the development of a coherent PI. Conversely, inadequate socialization may contribute to role ambiguity, reduced confidence, and difficulties adapting to clinical environments (4–6). Consequently, identifying PS enhancers remains a priority in contemporary nursing education. Recent evidence highlights the importance of professional values, belongingness, meaningful clinical learning experiences (CLEs), and supportive educational environments in promoting students' professional development (7–10). Despite growing evidence, research has largely examined

PS through interpersonal learning processes while paying considerably less attention to the organizational dimensions of clinical learning (4, 8).

Clinical experiences strongly shape PS by exposing students to professional roles in authentic healthcare settings. Through participation in clinical practice, nursing students develop clinical competence while internalizing the professional values, norms, and behaviors of the nursing profession. Characterized by belongingness, mentorship, preceptorship, and effective role modeling, supportive CLEs facilitate professional development and identity formation processes (4, 5, 7, 8). However, this literature mainly portrays PS as emerging from relationships with mentors, preceptors, and role models, while largely overlooking organizational learning within clinical settings (4, 5).

Clinical learning extends beyond direct patient care and interpersonal interactions. During clinical placements, nursing students are continuously exposed to the organizational and managerial processes that underpin nursing care delivery (8, 11). These processes include workflow organization, staffing decisions, care coordination, communication, leadership practices, and resource management, which are integral components of clinical management (12). In this study, clinical management refers to the organizational and administrative processes, primarily coordinated by nurse managers, through which clinical units are organized, staffed, and operated daily (13). By observing clinical management processes and nurse manager leadership, students gain insights into professional responsibilities, organizational decision-making, leadership, and the realities of contemporary nursing practice (14). Clinical management experiences (CMEs) therefore represent an important organizational learning context through which nursing students observe, interpret, and internalize leadership practices, organizational routines, and professional responsibilities beyond direct patient care.

The importance of mentorship, preceptorship, role modeling, belongingness, and supportive CLEs in facilitating nursing students' PS and PID has largely been explored (4, 5, 7, 8), but students' experiences of clinical management practices (CMPs) remain underexplored. PS has largely been framed through interpersonal and pedagogical processes, but how observing organizational processes, leadership activities, staffing decisions, care coordination, and managerial responsibilities contribute to students' professional learning and identity formation remains understudied (4, 8). Yet these experiences may fundamentally shape how students understand leadership, organizational responsibility, professional decision-making, and their future roles as registered nurses (11, 14). Consequently, CMEs remain an underexplored organizational dimension of PS in nursing education despite their potential to shape students' understanding of leadership, organizational responsibility, and readiness for future professional practice. This gap spans healthcare systems: international reviews of CLEs consistently emphasize interpersonal, supervisory, and pedagogical influences while largely overlooking the organizational and managerial dimensions of workplace learning (4, 8).

This study was informed by professional socialization theory (PST) (15, 16), which conceptualizes PS as a dynamic process through which individuals internalize the values, norms, knowledge, behaviors, and identities associated with a profession. The theory was considered particularly relevant because it emphasizes that professional learning occurs not only through interpersonal interactions but also through participation in professional communities and engagement with organizational cultures (11, 15). PST proposes three mechanisms particularly relevant to this study: observing experienced practitioners, participating in organizational routines and decision-making, and internalizing workplace norms through repeated exposure to clinical practice (11, 15, 17). These mechanisms closely align with students' exposure to CMEs, through which leadership practices, organizational routines, and workplace cultures become visible and meaningful during clinical placements (14). From this perspective, CMEs represent an important, yet underexplored, context through which nursing students develop PI and an understanding of future professional roles.

Guided by PST (15, 16), this study aimed to explore nursing students' experiences of CMPs and examine how these experiences contribute to PS within CLEs. PS constitutes a foundational stage in nursing students' long-term career development because it supports PID, leadership awareness, and preparedness for transition into professional nursing practice (4, 5). By conceptualizing CMEs as an organizational learning context rather than merely an administrative function, this study offers a novel perspective on PS and extends the current understanding of how organizational experiences contribute to PID among nursing students.

This study addressed the following research question:

How do nursing students experience CMPs during their clinical placements, and how do these experiences contribute to their PS?

2. Methods

2.1. Design

A qualitative descriptive design was employed to explore nursing students' experiences of CMPs and how these experiences contributed to their PS. Qualitative descriptive methodology is particularly appropriate for obtaining rich, practice-oriented descriptions of participants' experiences and interpretations of phenomena occurring in natural clinical settings while remaining close to participants' own accounts (18–

20). This study adopted this approach to comprehensively examine nursing students' experiences of CMPs during internship placements rather than to generate theory.

This study was informed by PST (15, 16), as it provides a conceptual lens for interpreting how students construct professional knowledge, values, identities, and role expectations through CME exposure. Although the analysis was conducted inductively using Braun and Clarke's reflexive thematic analysis (RTA), the theoretical framework informed findings' interpretation rather than directing data coding or theme development, consistent with RTA principles (21). This study followed the Consolidated Criteria for Reporting Qualitative Research checklist (22) to enhance methodological transparency and reporting quality.

2.2. Setting and Participants

This study was conducted in the Department of Nursing, Faculty of Health Sciences, at a private university in Istanbul, Türkiye. Participants were recruited from senior nursing students undertaking final-year internship placements across diverse clinical settings. Final-year students were considered particularly well positioned to reflect on CMEs because they had extensive exposure to nurse managers, organizational processes, and multidisciplinary clinical teams throughout their internship placements.

Purposive sampling was used to recruit participants who had direct experience observing CMPs and interacting with nurse managers during their internships. Eligibility criteria included (1) being enrolled in the final year of the undergraduate nursing program, (2) actively undertaking clinical internship placements during data collection, and (3) willingness to share CMEs and PS experience. Students who had limited clinical placement experience or were unavailable for face-to-face interviews during the study period were excluded.

All students who were invited to participate agreed to take part; no student declined or withdrew after enrollment. Overall, 17 senior nursing students participated in the study. During data collection, all participants were undertaking internships across different clinical units, providing substantial opportunities to observe CMPs, leadership practices, and organizational routines in everyday nursing practice.

The sample size was not predetermined but evolved iteratively throughout the data collection, consistent with the qualitative descriptive methodology and RTA. Recruitment and data collection proceeded concurrently and continued until the research team judged that the dataset provided sufficient depth and informational richness to comprehensively address the study aim and support meaningful thematic interpretation. Consistent with RTA principles, the researchers concluded recruitment once participants' accounts provided sufficient richness and diversity rather than after reaching data saturation (21).

2.3. Data Collection

Data were collected between February 20 and May 15, 2026 through semi-structured, face-to-face individual interviews. Semi-structured interviews were considered appropriate because they allowed participants to describe their experiences in depth while providing sufficient flexibility to explore emerging issues relevant to the research question (23). The research team developed the semi-structured interview guide specifically for this study based on the study aim, PST, and relevant literature to explore students' experiences of CMPs, interactions with nurse managers, perceptions of organizational processes, and PS. The interview guide comprised broad, open-ended questions supported by probing questions to encourage participants to elaborate on their experiences (23). Example questions included: *"How would you describe your CMP experiences during your clinical placements?"* and *"Do you think your clinical management-related experiences influenced your perception of the nursing profession? If so, how?"* Supplementary File 1 provides the complete interview guide.

The researchers approached potential participants face-to-face during their clinical placement rotations and invited them to participate in the study. Interviews were scheduled at a time convenient for each participant and were conducted in a private meeting room at the university to ensure confidentiality and minimize interruptions. Only the participant and the interviewer were present during each interview; no other individuals attended. Two research team members (SSO and ŞS), both experienced in qualitative interviewing and nursing education, conducted the interviews in Turkish. Neither interviewer had a supervisory or evaluative role in relation to the participants during the study period. The interviewers had no prior personal or teaching relationship with the participants before the study. Participants were informed that the interviewers were faculty members conducting research on students' clinical experiences but had no further personal information about them.

Before each interview, the researchers informed participants about the study's purpose, voluntary participation, confidentiality procedures, and their right to withdraw at any time without penalty. Verbal informed consent was obtained before data collection commenced.

Open-ended questioning and flexible probing techniques were used to facilitate rich descriptions of participants' experiences while allowing emerging issues to be explored in greater depth. Interviews lasted between 26 and 37 minutes (mean = 29.5 minutes) and were audio-recorded with participants' permission. Each participant was interviewed once; no repeat interviews were conducted. Field notes documenting contextual observations and initial analytical reflections were recorded immediately after each interview to support reflexive interpretation during analysis. Audio recordings were transcribed verbatim shortly after each interview, and all transcripts were checked against the original

recordings for accuracy before analysis. Transcripts were not returned to participants for review or correction; accuracy was verified solely by the research team against the original audio recordings.

2.4. Data Analysis

Data were managed manually without the use of qualitative data analysis software. Data were analyzed using RTA as described by Braun and Clarke (21). RTA was selected because it facilitates an in-depth exploration of participants' experiences and the meanings they attribute to those experiences while acknowledging the active interpretive role of the researchers in knowledge generation. This approach was particularly appropriate because the study sought to understand how nursing students interpreted their CMEs and how these experiences contributed to their PS.

The analysis followed Braun and Clarke's six recursive phases: (1) familiarization with the data, (2) generating initial codes, (3) constructing initial themes, (4) reviewing and developing themes, (5) defining and naming themes, and (6) producing the report. The process was iterative rather than linear, with movement between phases as interpretations developed.

The researchers began the analysis by repeatedly reading the interview transcripts to familiarize themselves with the dataset. Initial codes were generated inductively from participants' accounts rather than from a pre-existing coding framework. Through an iterative and reflexive process, patterns of shared meaning were identified and developed into candidate themes, which were continuously reviewed, refined, and defined to ensure conceptual coherence and alignment with the study aim. A coding framework documenting the progression from initial codes to subthemes and themes was maintained throughout the analysis and is available from the corresponding author upon reasonable request.

Three researchers (SSO, SS, and EU) conducted the analysis collaboratively, meeting regularly to discuss interpretations, scrutinize emerging themes, and challenge assumptions. These discussions formed an integral part of the reflexive analytical process rather than serving to establish coding reliability or consensus. Consistent with the RTA, the researchers acknowledged that their disciplinary backgrounds, nursing education experiences, and theoretical perspectives inevitably shaped data interpretation. Rather than seeking coder agreement, reflexive dialogue was used to deepen engagement with the data and enhance analysis richness and coherence. The PST informed the final themes' interpretation and contextualization but did not guide coding or theme development.

2.5. Rigor and Reflexivity

The researchers enhanced study rigor through strategies aligned with Lincoln and Guba's criteria of credibility, transferability, dependability, and confirmability while maintaining RTA's reflexive principles (21, 24).

Credibility was enhanced through repeated immersion in the data, iterative engagement with the transcripts, reflexive discussions within the research team, and the inclusion of representative participant quotations that illustrated the analytical interpretations. These strategies supported a rich and coherent interpretation of participants' experiences rather than verification of a single objective account. Member checking was not conducted; the inclusion of rich, representative participant quotations was instead used to support the credibility of the interpretations.

Transferability was supported by providing detailed descriptions of the study setting, participant characteristics, and research procedures, enabling readers to determine the findings' applicability to other contexts.

Dependability was strengthened by maintaining an audit trail documenting methodological and analytical decisions throughout the research process. The research team also documented the evolution of codes, themes, and interpretive decisions to enhance methodological transparency.

Confirmability was addressed through ongoing reflexive engagement rather than through researcher neutrality. Throughout the study, the researchers critically considered how their disciplinary backgrounds, nursing education experiences, and theoretical perspectives influenced data generation, interpretation, and theme development. Regular peer debriefing sessions encouraged critical dialogue, challenged assumptions, and promoted analytical depth.

Reflexivity was embedded throughout the research process. The research team continuously reflected on how their professional experiences, disciplinary backgrounds, prior knowledge, and theoretical assumptions shaped interactions with participants and data interpretation. The researchers' complementary expertise in nursing education and qualitative research supported critical dialogue and multiple interpretive perspectives throughout the analysis.

2.6. Ethical Considerations

The Acibadem Mehmet Ali Aydinlar University Medical Research Evaluation Board (ATADEK) (Approval No: 2026-04/41; Date: February 19, 2026) ethically approved the study protocols. The relevant faculty administration approved the study before data collection. Before each interview, participants were informed about the study purpose, participation voluntariness, confidentiality procedures, and withdrawal rights at any time without penalty. All participants provided verbal informed consent before participation. Permission to audio-record the interviews was also obtained before commencing each interview. To ensure anonymity and confidentiality, all transcripts were de-identified, and participants were assigned unique codes. Audio recordings, transcripts, and other research data were stored securely and were accessible only to the research team.

3. Results

3.1. Demographics

Overall, 17 senior nursing students participated in the study. All participants were undertaking internship placements across various clinical settings and had direct exposure to CMPs and nurse manager leadership. Participant characteristics are presented in Table 1.

Table 1
Participants' sociodemographic data

Participant No	Age	Academic Year	Part-time Work
P1	21–23	Fourth grade	Yes
P2	21–23	Fourth grade	Yes
P3	24–26	Fourth grade	Yes
P4	21–23	Fourth grade	Yes
P5	21–23	Fourth grade	Yes
P6	21–23	Fourth grade	No
P7	21–23	Fourth grade	Yes
P8	21–23	Fourth grade	No
P9	24–26	Fourth grade	Yes
P10	21–23	Fourth grade	No
P11	24–26	Fourth grade	No
P12	21–23	Fourth grade	No
P13	21–23	Fourth grade	Yes
P14	21–23	Fourth grade	Yes
P15	24–26	Fourth grade	No
P16	21–23	Fourth grade	No
P17	21–23	Fourth grade	No

Analysis of the interview data generated four interconnected themes and 15 subthemes related to nursing students' experiences of CMPs and PS. Collectively, the themes illustrate how CME exposure shaped students' understanding of organizational nursing practice and contributed to their PS. Figure 1 shows the thematic structure and the relationships among the themes and subthemes.

3.2. Theme 1: Structuring Clinical Work and Management Processes

Participants described clinical environments as structured through planned workflows, clearly defined roles and organized task allocation. They reported observing nurse managers coordinating daily operations by considering patient needs, staff competencies, and workload demands. Clinical management was commonly perceived as an organizational process that coordinated people, resources, and clinical work while supporting the effective functioning of healthcare units.

Participants frequently referred to role clarity when describing the functioning of clinical teams. They reported that responsibilities were distributed among nurse managers, team leaders, clinical educators, and staff nurses, and that these roles were generally well defined within

the clinical settings where they completed their internships. Students emphasized that understanding these roles clarified clinic–service organization and nursing care coordination.

One participant described the organizational structure of the unit as follows: *“We have a charge nurse, team leaders, clinical educators, and staff nurses. Responsibilities are clearly defined, and everyone knows what they are responsible for.”* (P6). Another participant similarly explained: *“There are a team leader, a clinical educator, mentor nurses, and staff nurses. Task assignments are announced at the beginning of each week, and responsibilities are distributed accordingly.”* (P4).

The students also described workload distribution as an important clinical management component. According to the participants, nurse managers assigned patients based on the nurses’ experience levels, competencies, and current workload. Several participants reported observing efforts to distribute responsibilities fairly among team members and to ensure that less experienced nurses received appropriate support.

One participant stated: *“Patients are assigned according to nurses’ experience, and the workload is distributed evenly.”* (P1). Another participant described how assignments were adjusted according to staff competence: *“The charge nurse distributes patients according to nurses’ experience levels. New nurses are paired with experienced nurses so that they can learn and receive support.”* (P7).

Participants further emphasized nurse manager roles in coordinating staffing and maintaining workflow. They reported observing nurse managers preparing schedules, managing staffing shortages, allocating resources, and responding to unexpected changes in patient volume or workforce availability. These managerial activities were perceived as essential for maintaining continuity of care and ensuring that clinical operations proceeded efficiently.

As one participant explained: *“Preparing schedules and managing staffing shortages is actually very difficult.”* (P14). Another participant highlighted the complexity of coordinating clinical operations: *“If someone resigns or staffing changes occur, the charge nurse has to reorganize the schedule, arrange support, and make sure everything continues to function.”* (P2).

Overall, the participants perceived clinical management as a structured organizational process through which planning, coordination, and role clarification supported the effective functioning of clinical units. These organizational experiences also represented an important learning context in which students began to appreciate the broader responsibilities associated with professional nursing practice.

3.3. Theme 2: Leadership Role and Nurse Manager Style

Participants consistently identified nurse managers as visible leaders who coordinated clinical activities, guided staff, resolved problems, and maintained the daily functioning of clinical units. Observing these leadership behaviors provided an important CME for developing an early understanding of leadership, communication, and professional responsibility.

Participants frequently described nurse managers as approachable individuals who listened to staff concerns and communicated effectively when problems arose. Students consistently perceived these leadership behaviors as contributing to a supportive and psychologically safe CLE. One participant described how the nurse manager approached problems: *“When a problem occurs, they do not take a one-sided approach. They listen to both the patient and the nurse before making a decision.”* (P5). Another participant emphasized the supportive nature of the nurse manager: *“Nurses feel comfortable sharing their problems because they believe the manager can resolve them and support them when difficulties arise.”* (P2).

The students also highlighted how nurse managers balance interpersonal relationships with managerial authority. As one participant explained: *“She treats us kindly, but at the same time you can still feel that she is the manager. When necessary, she can make people listen and follow the rules.”* (P8). Problem-solving was another frequently observed leadership behavior. One participant commented: *“What impressed me most was how successfully the charge nurse communicated with other departments and resolved problems when they occurred.”* (P4).

Participants further emphasized the importance of remaining calm during unexpected situations. As one participant stated: *“Even when unexpected situations happen, the charge nurse remains calm. Everyone turns to her, and she manages the situation without creating panic.”* (P7).

Overall, leadership behaviors characterized by accessibility, fairness, communication, and effective problem-solving shaped students’ perceptions of professional nursing leadership and provided meaningful examples of how leadership supports patient care and team functioning.

3.4. Theme 3: System-Related Challenges and Working Conditions

Beyond observing effective CMPs, the participants became aware of the organizational challenges that influence clinical management. Staff shortages, heavy workloads, workforce instability, and increasing managerial responsibilities were described as realities of contemporary nursing practice that shaped the work environment and students’ professional learning.

The participants reported that nurse managers frequently combined managerial and clinical responsibilities during staffing shortages. One participant explained: *"Due to the lack of staff, the nurse manager sometimes has to take part in patient care."* (P7). Students also observed workforce instability. One participant stated: *"Most of the nurses in our unit were new and still in their orientation period. Because of this, communication problems sometimes occurred, and the charge nurse had to manage these situations."* (P5). Another participant observed: *"Because of staffing shortages, the clinical educator sometimes works as a staff nurse. I only realized later that she was actually a clinical educator."* (P13).

Students further described heavy workload demands affecting nurse managers and clinical nurses. The participants observed that busy clinical environments, high patient acuity, and continuous operational pressures created challenges for maintaining workflow and ensuring quality of care. These pressures were perceived as affecting not only nursing staff but also nurse managers, who were expected to balance multiple responsibilities simultaneously. One participant reflected: *"The unit is very busy, and nurses often struggle because of the workload."* (P5).

The participants also described organizational pressures related to performance expectations, patient safety, and the need to respond effectively to unexpected situations. Several students reported observing that nurse managers were required to remain accessible, make rapid decisions, and maintain unit functioning despite ongoing challenges. One participant highlighted the importance of crisis management within highly demanding clinical environments: *"This unit requires very strong management because unexpected situations can occur at any moment. If the nurse manager loses control of the situation, the whole unit can be affected."* (P16). The same participant further emphasized the importance of remaining calm during emergencies: *"What impressed me most was how calmly and quickly the situation was managed. The response was rapid, organized, and effective."* (P16).

Overall, these organizational challenges became important learning experiences. Students can develop a more realistic understanding of the complexity of nurse managers' roles and the organizational demands of professional nursing through exposure to the realities of staffing limitations, operational pressures, and crisis management.

3.5. Theme 4: PS through CMEs

Participants consistently described CMEs as extending learning beyond direct patient care and serving as a critical organizational learning context through which PS occurred. Observing leadership practices, organizational processes, workplace challenges, and team interactions influenced how students understood professional nursing roles and prepared them for the transition to professional practice.

Taking responsibility emerged as a top experience. One participant explained: *"We are treated like nurses now and are given responsibilities."* (P12). Similarly, another participant reflected: *"Even though we are students, they expect us to take responsibility and participate in patient care. This makes us feel more prepared for professional practice."* (P5).

Participants also described learning through observing nurse managers and experienced nurses. They reported observing leadership behaviors, communication styles, decision-making processes, and problem-solving approaches demonstrated within clinical environments. The participants stated that these observations contributed to their understanding of professional nursing practice and shaped their expectations regarding their future professional roles. As one participant stated: *"I learned a lot by observing the nurse manager's behavior and the way problems were handled within the unit."* (P1). Another participant noted: *"Watching how experienced nurses and managers communicate with staff and patients helped me understand how I want to behave as a future nurse."* (P15).

A sense of belonging to the clinical team was another commonly reported experience. Greater involvement in daily activities and increased responsibility strengthened participants' sense of healthcare team membership. These experiences were perceived as strengthening their confidence and PI. One participant stated: *"We started to feel like a part of the team."* (P17). Another participant similarly explained: *"They trusted us with responsibilities and included us in the daily workflow. That helped me feel like I belonged there."* (P16).

Observing clinical teams' responses to complex situations, staffing challenges, and workplace pressures increased participants' awareness of professional responsibilities and nursing practice realities. Exposure to effective CMPs and organizational challenges helped students develop a broader understanding of the nursing profession beyond direct patient care. One participant reflected on how observing managerial responsibilities changed her perception of nursing practice: *"Before my internship, I mainly thought about patient care. However, observing the nurse manager helped me realize how much coordination, planning, and problem-solving are required to keep a unit functioning."* (P4). Another participant described how exposure to staffing challenges increased awareness of workplace realities: *"I realized that nursing is not only about providing care. There are also staffing problems, communication issues, and unexpected situations that need to be managed every day."* (P13).

Collectively, these findings identify CMEs as a key organizational learning context that fosters professional responsibility, leadership awareness, belonging, PI, and the transition from student to professional nurse.

4. Discussion

This study explored how nursing students experienced clinical management during their internship placements and how these experiences contributed to their PS. Rather than functioning solely as an organizational process, clinical management emerged as an organizational learning context through which students observed leadership, interpreted workplace realities, and gradually developed their PI. Students experienced clinical management through three interconnected dimensions: the structuring of clinical work and management processes, the leadership role and style of nurse managers, and system-related challenges and working conditions. These experiences, in turn, fostered PS by encouraging responsibility taking, learning through role modeling, developing a sense of belonging, and understanding the realities of professional nursing. Collectively, these findings position clinical management as an organizational function and an educational resource within the CLE that supports PID (Fig. 2).

While previous research has consistently emphasized CLE importance in nursing education, the present findings suggest that student CME represents a specific organizational dimension of a PS occurrence-enabled environment (4, 7, 8). Notably, supportive clinical environments can promote professional confidence, role awareness, and responsibility, and identity development among nursing students (5, 7, 9). Similarly, meaningful interactions with clinical staff, effective supervision, and supportive workplace cultures markedly contribute to students' learning and professional growth (4, 8). The present study extends this literature by demonstrating that students also learn by observing how clinical work is organized, coordinated, and led. This finding corroborates workplace learning perspectives, which suggest that learning occurs through participation in everyday organizational practices and exposure to workplace routines (11). Accordingly, our findings identify clinical management as a key organizational learning context for PS occurrence.

The first theme highlighted students' experiences of structured clinical work and management processes. Participants described organized workflows, clearly defined professional roles, and equitable workload allocation as key features of effective clinical management. These findings corroborate previous research demonstrating that well-structured CLEs facilitate students' understanding of professional roles and support meaningful learning through authentic clinical experiences (4, 7, 8). For example, Weerasekara et al. (8) emphasized that CLE quality plays a central role in nursing students' professional development. Similarly, Levett-Jones and Lathlean (7) argued that supportive and well-organized clinical environments foster students' sense of belonging, confidence, and engagement in learning. Our findings further suggest that these organizational characteristics support students' learning by facilitating clinical practice and by making professional roles and management processes visible within everyday clinical work.

From the PST perspective, organized clinical environments provide opportunities for students to observe how professional responsibilities, expectations, and relationships are enacted in everyday practice (15, 16). Role clarity, coordinated workflows, and visible organizational structures help students understand nursing service delivery. Participation in workplace practices also helps them internalize professional norms and expectations (11). Mafumo et al. (25) similarly reported that PS develops through participation in clinical environments where students observe, practice, and internalize professional values and behaviors. The present findings extend this literature by identifying organizational structures, management practices, and everyday workplace routines as PS mechanisms. Alongside interpersonal interactions, these mechanisms gradually develop students' understanding of professional responsibilities and organizational accountability.

The second theme focused on the leadership role and nurse manager style. Participants consistently described nurse managers as coordinators, decision-makers, problem-solvers, and accessible sources of support within the clinical environment. These findings align with evidence that formal education and observations of everyday professional practice shape PS (4, 16, 25). This finding also corroborates evidence indicating that nurse managers' leadership behaviors influence learning environments by shaping communication, support, and professional role modeling within clinical settings (14).

A notable finding was that students perceived nurse managers as visible professional role models. By observing leadership behaviors, communication styles, conflict management strategies, and decision-making processes, students developed behavioral templates that informed how they envisioned themselves as future nurses. Previous research has primarily highlighted the influence of clinical instructors, mentors, and preceptors on PID (4, 5, 25). However, the present findings suggest that nurse managers represent an additional and often overlooked source of PS. Through exposing students to leadership, organizational decision-making, workforce coordination, and system-level responsibilities, nurse managers broaden students' understanding of professional nursing beyond direct patient care (13, 14). These findings position nurse managers as organizational leaders and as influential educators within the CLE.

The findings further emphasize the importance of supportive leadership in promoting PS. Students valued nurse managers who were approachable, fair, respectful, and responsive to staff concerns. Such leadership behaviors could foster psychologically safe learning environments in which students feel supported while simultaneously observing effective professional leadership in practice (14, 26). Similarly, supportive leadership has been associated with positive CLEs, enhanced learning experiences, and professional development among nursing students (4, 25). Consequently, leadership was experienced not only as an administrative responsibility but also as an educational mechanism through which professional values, organizational expectations, and PI were transmitted within the CLE.

The third theme reflected students' observations of system-related challenges and working conditions. Participants frequently described staff shortages, increasing workloads, workforce instability, and expanding managerial responsibilities. These findings support international evidence documenting workforce shortages and increasing organizational complexity across healthcare systems (27, 28). Similar challenges can influence CLE quality and students' educational experiences by increasing workload pressures and limiting opportunities for supervision and support (4, 25). Although these system-level challenges were often perceived as barriers, the students also described them as valuable learning experiences that increased their awareness of the organizational realities of nursing practice. Observing how nurse managers balanced competing priorities, allocated limited resources, and maintained patient care under pressure enabled students to develop a more realistic understanding of professional nursing.

Importantly, the students did not perceive these organizational challenges solely as barriers to learning. Instead, they regarded nurse managers' responses to patient safety demands, care coordination needs, staffing shortages, and unexpected situations as valuable learning experiences. Exposure to crisis management, rapid decision-making, and organizational problem-solving enabled students to appreciate nursing leadership complexity and the contextual factors influencing patient care (11, 14). These findings support workplace learning theory, which proposes that participation in authentic workplace activities—including responding to complexity, uncertainty, and organizational constraints—constitutes an important mechanism through which professional capability develops (11).

From a PST perspective, exposure to workplace realities contributes to the gradual internalization of professional expectations by enabling students to understand the organizational context within which nursing practice occurs (15, 16). Rather than viewing nursing exclusively as a caregiving profession, the participants developed a broader understanding that incorporated leadership, coordination, workforce management, and organizational accountability. This finding corroborates workplace learning theory, which proposes that participation in authentic organizational practices enables learners to develop professional judgment and understand the contextual nature of professional work (11). The present findings therefore extend previous research by suggesting that organizational challenges themselves contribute positively to professional learning when students have opportunities to observe how experienced nurse managers successfully navigate these complexities.

The final theme focused on PS through CMPs. Participation in clinical environments strengthened the participants' responsibility, professional awareness, confidence, and sense of belonging. These findings closely align with PST, which conceptualizes PS as a developmental process through which individuals progressively internalize professional values, behaviors, identities, and role expectations by participating in professional communities and engaging with workplace practices (15, 16). Similarly, previous research has demonstrated that participation in supportive CLEs promotes PID, responsibility, confidence, and belonging among nursing students (4, 5, 7).

Role modeling emerged as one of the primary mechanisms supporting this process. Participants frequently described learning through observing nurse managers and experienced nurses, particularly their communication styles, leadership behaviors, decision-making processes, and responses to challenging situations. Consistent with previous research, these observations provide behavioral and professional templates that support PID (4, 5, 17, 25). This finding also corroborates evidence indicating that leadership behaviors demonstrated by nurse managers shape workplace culture and provide observable models of professional practice for staff and students (14).

Another important finding was students' increasing sense of belonging within clinical teams. Previous literature shows that belongingness is essential for PID, professional confidence, and a successful transition to practice (4, 7, 29). In the present study, participants described feeling progressively accepted as members of the healthcare team as they assumed greater responsibility and became actively involved in everyday clinical work. These experiences strengthened their confidence and their identification with the nursing profession, consistent with evidence demonstrating that meaningful participation in supportive clinical environments facilitates PID (5, 16).

Importantly, responsibility-taking, role modeling, belongingness, and exposure to workplace realities did not emerge as isolated experiences. Rather, they functioned as interconnected mechanisms through which PI gradually developed during clinical education. This interpretation agrees with contemporary conceptualizations of PID, which describe identity development as a dynamic and socially situated process shaped by authentic participation, interpersonal relationships, and engagement with workplace practices (5, 11, 15). Therefore, CMEs provided students with opportunities to observe organizational processes, participate in authentic professional practice, and reflect upon the broader responsibilities associated with nursing. Through these experiences, the participants moved beyond seeing themselves solely as students and increasingly identified themselves as future members of the nursing profession (4, 16).

Overall, the findings suggest that CMEs represent an underrecognized organizational learning context within undergraduate nursing education. By observing organizational structures, leadership practices, workplace challenges, and professional interactions, students gradually developed professional responsibility, leadership awareness, belonging, and PI. These findings agree with workplace learning and PS perspectives, which emphasize that authentic participation in organizational practice facilitates professional competence and identity development (11, 15, 16). Recognizing CME educational value may help nursing schools and healthcare organizations intentionally integrate

exposure to clinical leadership and organizational processes into undergraduate clinical education, thereby strengthening students' PS and supporting their successful transition to registered nursing practice (14, 27).

4.1. Implications for Nursing Education and CLEs

The findings suggest that CMEs represent an important yet underrecognized organizational learning context within undergraduate nursing education. Beyond direct patient care, exposure to organizational structures, leadership practices, workplace coordination, and system-level challenges appears to contribute substantially to students' understanding of professional roles, leadership responsibilities, and PID (11, 15).

A particularly important implication is the educational role of nurse managers within CLEs. Although nurse managers are primarily responsible for coordinating clinical services, the participants also perceived them as influential professional role models (14). Creating structured opportunities for students to observe leadership activities, organizational decision-making, conflict management, workforce coordination, and interprofessional collaboration may enhance professional learning and facilitate PS.

Clinical placement programs may therefore benefit from intentionally incorporating leadership-focused learning opportunities, including structured observation, guided reflection, and discussions related to CMEs (7, 11). Such educational activities may help students connect organizational processes with professional nursing practice and strengthen their understanding of leadership beyond direct patient care.

The findings further highlight the importance of supporting students in reflecting on workplace realities, including staffing shortages, workload pressures, organizational complexity, and system-level decision-making. Rather than viewing these challenges solely as barriers to learning, educators may use them as opportunities to promote critical reflection, realistic professional expectations, and leadership awareness.

Strengthening collaboration among nursing faculty, clinical educators, and nurse managers may further enhance CLEs that intentionally support PS and facilitate students' successful transition from nursing student to registered nurse.

4.2. Strengths and Limitations

This study provides an in-depth exploration of how nursing students experience clinical management and how these experiences contribute to PS. A major strength of the study is its focus on an underexplored aspect of nursing education by conceptualizing CME as an organizational learning context rather than viewing it solely as an administrative function. The inclusion of internship nursing students who had substantial exposure to nurse managers and organizational processes across different clinical settings enabled rich descriptions of authentic clinical experiences.

The use of semi-structured interviews together with RTA facilitated an in-depth interpretation of participants' experiences and the meanings they attributed to those experiences. Furthermore, the PST application provided a coherent theoretical framework for interpreting how CMEs contributed to gradual PID.

Several limitations should be acknowledged. This study was conducted within a single university, and the participants were drawn from one educational context; therefore, the findings may not reflect experiences across different nursing programs or healthcare organizations. In addition, the findings represent only nursing students' perspectives and do not include the experiences of nurse managers, clinical educators, mentors, or other professionals who contribute to CLEs. As with all qualitative research, the findings are context-specific and are intended to provide analytical rather than statistical generalization.

Future research should explore CMEs across multiple educational institutions and healthcare settings while incorporating the perspectives of different stakeholders involved in clinical education. Longitudinal studies may further clarify how exposure to clinical management throughout undergraduate education influences PID, leadership development, and the transition from student to registered nurse.

5. Conclusion

This study explored nursing students' CMEs and their influence on PS. The findings demonstrated that students experienced clinical management through structured organizational processes, leadership practices, and system-related workplace challenges. Rather than functioning solely as administrative activities, these experiences provided meaningful learning opportunities that contributed to responsibility-taking, belongingness, role modeling, leadership awareness, and PID.

A central contribution of this study is CME conceptualization as an organizational learning context that supports PS within undergraduate nursing education. Students gradually developed a broader understanding of professional nursing that extended beyond direct patient care by observing organizational structures, leadership practices, workplace coordination, and the realities of contemporary nursing practice.

These findings suggest that patient care participation, organizational processes, leadership, and workplace realities jointly shape PS. Recognizing CME educational value may encourage nursing schools and healthcare organizations to intentionally integrate leadership observation, guided reflection, and organizational learning opportunities into undergraduate clinical education. Such initiatives can strengthen PID, leadership readiness, and students’ successful transition to registered nursing practice.

Abbreviations

- Clinical Learning Environments
- CLEs
- Clinical Management Experiences
- CMEs
- Clinical Management Practices
- CMPs
- Professional Identity
- PI
- Professional Identity Development
- PID
- Professional Socialization
- PS
- Professional Socialization Theory
- PST
- Reflexive Thematic Analysis
- RTA

Declarations

Ethics approval and consent to participate

Ethical approval for the study was obtained from the Acibadem Mehmet Ali Aydinlar University Medical Research Evaluation Board (ATADEK) (Approval No: 2026-04/41; Date: February 19, 2026). Additionally, the necessary permissions were obtained from the institutions where the study was conducted. Informed verbal consent was obtained from all participants. The study was conducted in accordance with the principles of the Helsinki Declaration.

Consent for publication

Not applicable.

Availability of data and materials

The datasets used and/or analyzed during the current study are available from the corresponding authors upon reasonable request.

Competing interests

The authors declare no competing interests.

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Authors’ contributions

SŞO, ŞS and EU made substantial contributions to the study design and data analysis. SŞO, ŞS and EU drafted the paper and critically revised it. All authors read and approved the final manuscript and share responsibility for the accuracy and integrity of the work.

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Figures

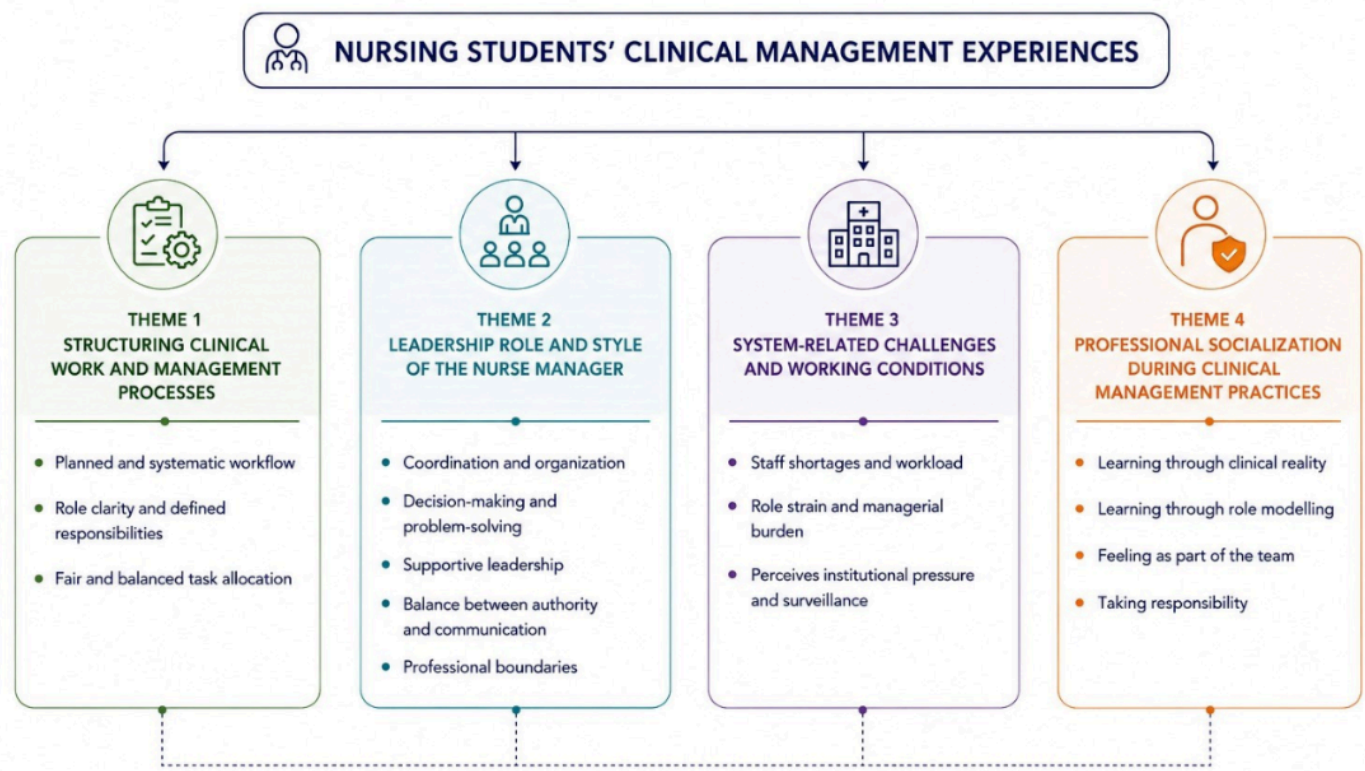


Figure 1

Themes and subthemes describing nursing students' experiences of clinical management practices

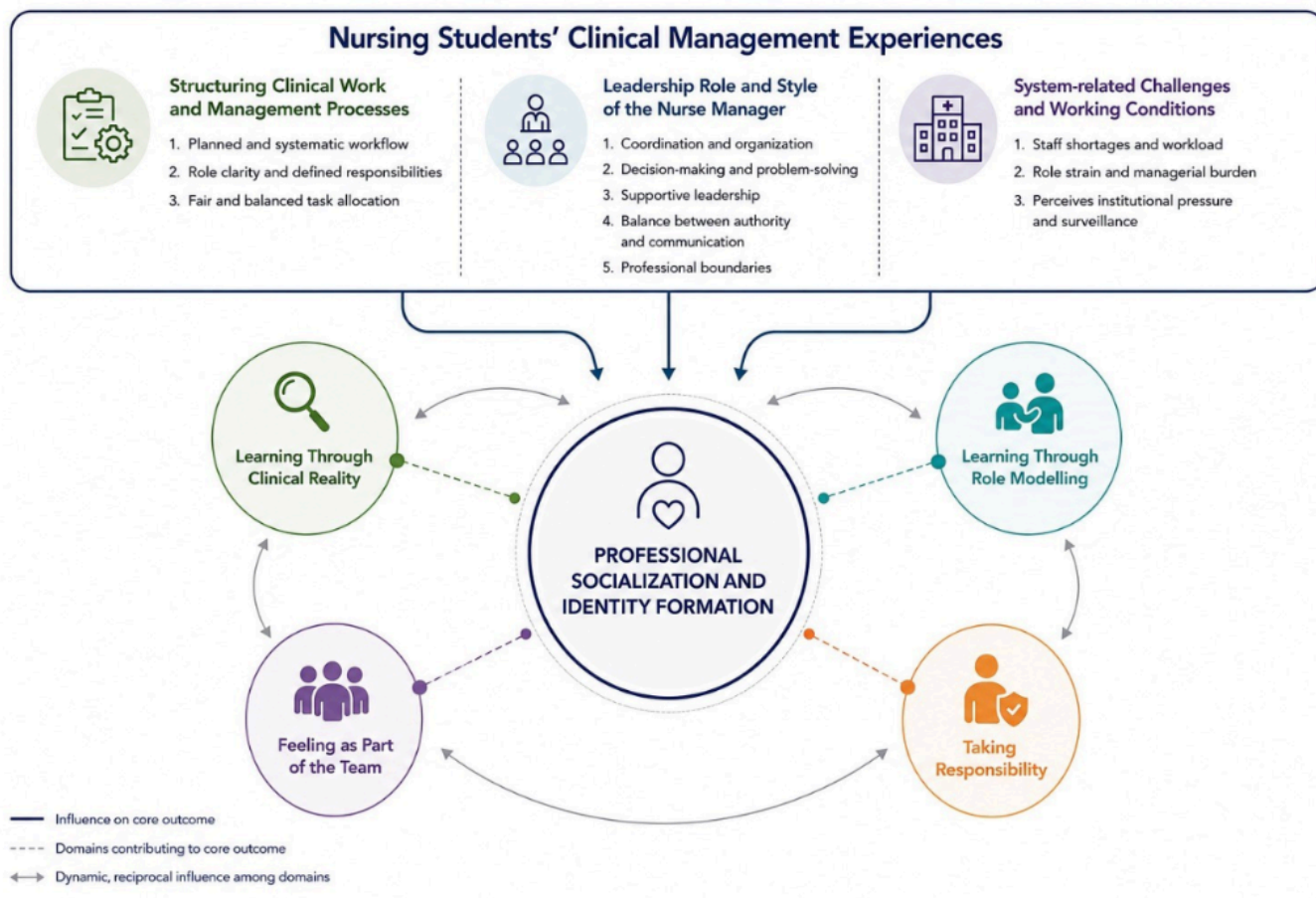


Figure 2

Clinical management experiences as an organizational learning context for professional socialization among nursing students

Supplementary Files

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