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Transitioning to residency: a qualitative study exploring residents' perspectives on strategies for adapting to residency

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Abstract

Background The transition to residency (TTR) goes along with new opportunities for learning and development, which can also be challenging, despite the availability of preparation courses designed to ease the transition process. Although the TTR highly depends on the organization, individual combined with organizational strategies that advance adaptation are rarely investigated. This study explores residents' strategies and experiences with organizational strategies to help them adapt to residency.

Methods We conducted a template analysis of interview transcripts with 16 second-year residents from different hospital-based specialties in the Netherlands. To identify residents' perceptions of their own and other healthcare professionals' strategies, our template consisted of the individual and organizational strategies originating from the Organizational Socialization theory.

Results Residents employed five individual strategies: observing, asking questions, establishing social relationships, and seeking information. These strategies helped them learn their tasks, appropriate behaviors, and integrate into their teams. On the organizational side, residents experienced six strategies, mapped through Organizational Socialization theory. Collective-individual: whether the residents felt they were treated as a group or as individuals. Formal-informal: whether the introduction period was formal, structured and explicit, or implicit and unstructured. Sequential-random: whether guidance was aligned with training levels or approached inconsistently. Fixed-variable: whether the residency program followed a fixed timeline or a flexible structure. Serial-disjunctive whether role models or experienced professionals were available for guidance or not. Investiture-divestiture: whether the healthcare team embraced residents' individuality or emphasized residents' conformity to norms. Factors influencing TTR included individual strategies, such as establishing social relationships, and organizational strategies, particularly interactional (relationships with healthcare professionals) and systemic strategies (training program structure). Residents' perceptions varied on whether these strategies facilitated or hindered their TTR.

Conclusion TTR involves dynamic interactions between residents and healthcare professionals, bridging individual and organizational strategies. This largely unexplored interaction adds a new dimension to Organizational Socialization theory. Importantly, residents' perceptions of these strategies varied: some thrived with independence, while others needed structured guidance. This suggests that residency programs should customize support to individual needs, balancing support and autonomy to improve transitions and enhance training.

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Introduction

The transition to residency (TTR) can be a difficult and stressful process for residents, since they have to adapt to a new context, role and tasks, and in the meantime become a member of the healthcare team [1–3]. In response, several undergraduate medical (UME) education programs have incorporated TTR content to help ease this shift [4–7]. However, while these UME efforts focus on preparing students prior to residency, this paper focuses specifically on the strategies used by residents and residency programs during residency itself to further smooth the transition. Graduate medical education (GME) programs, particularly at the residency level, continue to explore interventions that address not just educational components (e.g., courses and curriculum innovations), [7] but also the social dimensions of the transition [8–10]. The social dimensions include collegial relationships (including peer groups, near-peer teaching, peer learning communities), and multidisciplinary orientations (including relationships with supervisors), which are designed to facilitate experience-sharing and social integration [9–11]. Despite these efforts, there is a gap in understanding the informal social interactions that occur in clinical settings and how these interactions optimize residents' transition. Specifically, it remains uncertain how residents interact with other healthcare professionals to navigate this transition and how they perceive other healthcare professionals' initiatives [11]. This is especially important since TTR involves a dynamic social interplay between residents (their experiences, perspectives, and capabilities) and their organizational context (e.g., interaction with other healthcare professionals) [12, 13].

Residents often work in different teams and contexts, requiring them to develop strategies to adapt to their new role, responsibilities, and rules of interaction [1, 2, 14, 15]. While prior research on transitions primarily focused on educational and organizational strategies, such as the quality of the orientation program, and role clarification, this paper aims to explore the social dimensions of TTR, particularly how residents interact with other healthcare professionals to optimize their transition. Although we know from studies on medical students transitioning into new clerkships and nurses transitioning into their first jobs that 'proactive behaviors' such as seeking role clarification, feedback and building relationships can aid social integration [14–18], the specific social strategies used by residents have not yet been explored in depth. Additionally, research has shown that informal, unmentioned and hidden social forces can make it challenging for residents to navigate their new environments, despite formal educational efforts [16–18].

In the context of residency, program directors, supervisors and nurses play critical roles in residents' socialization processes [19–21]. These individuals may help introduce residents to the departmental processes (nurses) [20] and organize formal and informal orientation programs (supervisors) [21] or address residents' individual socialization needs [19]. To our knowledge, research has not yet explored residents' perspectives on how social interactions with other healthcare professionals can help their TTR.

To get a better understanding of residents' TTR within the social context, we draw upon Organizational Socialization theory to explore residents' strategies, their experiences other healthcare professionals use to facilitate their transition, and how they perceive the impact of other healthcare professionals' strategies on their own adaptation efforts. The findings of this study can contribute to the development and implementation of onboarding programs for residents and faculty development initiatives. Furthermore, our findings will advance the literature on residents' TTR and OS theory.

Organizational socialization's theoretical framework

Organizational Socialization (OS) theory provides a framework for understanding how residents adapt to their new roles and how healthcare professionals contribute to this adaptation process. OS consists of individual and organizational strategies that facilitate this transition. Individual strategies include how residents adapt to their new roles, including monitoring or observing, inquiring, changing jobs, social influencing and using written and electronic sources [22]. Organizational strategies, in our context, refer to support systems and strategies employed by healthcare institutions, such as hospitals and residency programs, to ease this transition, by facilitating residents' integration into a new social group [22, 23]. Six key organizational strategies can be identified. 1) Collective-individual refers to whether newcomers are treated as a groups with shared experiences or as individuals with unique, isolated experiences. 2) Formal-informal indicates whether the socialization process is formalized, such as structured orientation or informal, where learning takes place within everyday networks. 3) Sequential-random describes whether there is a clear, defined sequence of steps in the socialization

process (sequential) or whether the process is ambiguous or ever-changing (random). 4) Fixed-variable relates to the certainty newcomers have about the duration of their transition period – whether it is clearly defined or unpredictable. 5) Serial-disjunctive refers to whether newcomers are supported by role models or experienced insiders (serial) or left to navigate the process alone (disjunctive). Lastly, 6) Investiture-divestiture describes whether newcomers' existing skills and characteristics are embraced and affirmed (investiture) or stripped away and replaced (divestiture) [23].

Why organizational socialization theory fits this study

OS theory is particularly well-suited for this study because TTR is not merely about an individual process of skill acquisition, but it is considered as a complex socialization experience that occurs within the organizational framework of healthcare institutions [19]. Residents are embedded in systems where they must navigate both the expectations of their roles and the broader organizational culture [19]. OS theory provides a structured lens through which we can analyze how both individual strategies and institutional strategies facilitate or hinder this transition [22, 23]. It focuses on the interaction between individual adaptation strategies and the formal and informal mechanisms organizations use to help integrate newcomer residents [22]. Given that residency programs are highly structured environments where integration into teams, roles and routines is key, OS theory is ideal for understanding the social and organizational dynamics at play during this critical transition period.

Furthermore, OS has been increasingly used in Health Professions Education literature to study transitions [19, 24–28], making it a relevant approach for studying how residents adapt to new clinical roles. Previous studies have investigated transition in undergraduate medical education, nursing and program directors' perspectives on the transition from student to resident [19, 24–28]. Although these studies have used qualitative, quantitative and mixed methods to investigate both individual and organizational perspectives [19, 24–28], only one study identified individual strategies in undergraduate medical students [28] and one study explicitly identified the six OS strategies described by van Maanen & Schein from the perspective of residency program directors [19]. This study will add to the theory of OS by filling the gap and exploring the individual and organizational strategies from the perspective of residents.

Methods

Approach

We positioned ourselves in a constructivist paradigm, as we believed that knowledge is co-constructed between participants and researchers, and that multiple realities occur in social processes [29, 30].

Setting and sample

This study was conducted in a GME setting of specialties in an academic and a larger teaching hospital in the Netherlands. Characteristics of GME in this country are: (a) enrollment occurs throughout the year and usually involves a small number of residents, so peer-to-peer interactions between new and experienced residents affect the transition [31]; (b) UME comprises a three-year bachelor's and a mandatory subsequent three-year master's degree program consisting of a series of clinical rotations and a research project [32]; (c) after these six years of training, most graduates work a few years to gain exposure to their preferred specialty or broaden their skills in adjacent specialties [33]; (d) graduate training programs last 3–6 years and include 3–12 month rotations in two or three different hospitals, both academic and non-academic [34].

Via email, the initial researchers invited all 94 second-year residents at our two hospitals to participate in structured interviews; a convenience sample of 16 residents from 12 different program agreed (Table 1, Participant Characteristics). Second-year residents were chosen for their ability to reflect on the socialization process during their first year, while still being close enough to those

Table 1 Participant characteristics

Attribute	Number of participants
Gender, n	
Female	11
Male	5
Hospital, n	
Academic hospital	10
Nonacademic teaching hospital	6
Specialty: surgical, n	4
Orthopedic surgery	2
Obstetrics and gynecology	1
Ophthalmology	1
Specialty, non-surgical, n	12
Internal medicine	2
Pediatrics	2
Rehabilitation medicine	2
Cardiology	1
Rheumatology	1
Anesthesiology	1
Pathology	1
Psychiatry	1
Dermatology	1

experiences to offer valuable insights. We considered this sample size appropriate for an exploratory study, as it provided sufficient information power to capture residents' experiences. This assessment was guided by Malterud et al.'s framework for determining information power in qualitative research, which considers factors such as the study aim, sample specificity, quality of dialogue, and analysis strategy [35]. Given the specific focus on second-year residents and the comprehensive accounts provided during the interviews, we deemed the sample sufficient to address our research aim. It is important to note that while the interviews were originally conducted for broader exploratory purposes, the research questions were applied retroactively during data analysis, three years after data collection. Although the data collection and analysis were separated by time, the interviews allowed us to effectively address our revised research focus.

Ethical approval

Ethical approval was obtained from the ethical review board of the Central Ethics Review Board of the University Medical Center Groningen (register number: 20190064). All participants provided written informed consent. Participants did not receive any compensation.

Research team and reflexivity

Two students (ES, EW) conducted the interviews as part of their graduation project in their Master's program in educational sciences (ES) and organizational sciences (EW). The students and the senior researcher had no previous relationships with the participants. The interview structure and techniques were discussed in an interview training and by doing so, aligned among the interviewers to ensure consistency. The students and their supervisor reflected on how their backgrounds, assumptions, positioning, and behaviors might have influenced the research process [36, 37]. The students were unfamiliar with the researched context, which might have encouraged them to take on an open and curious stance in understanding the setting in which the residents worked.

The researchers who analyzed the interview data had various experiences in the residency setting, as both clinicians and researchers. GG is a resident in anesthesiology and a PhD in medical education with previous experience in qualitative research. RD is a psychiatrist and a senior researcher with extensive experience in qualitative research. JB is a (former) nurse and an assistant professor in educational sciences. GW is an anesthesiologist with experience as a residency program director in a large academic hospital and a professor in innovation in postgraduate training with experience in qualitative research. To add analytical depth and uncover aspects of the data the researchers with clinical experience might take for granted, our team was complemented with a qualitative researcher and professor in (veterinary) medical education (DJ), a preclinical medical student (AN) and an information specialist with experience in health professions education research (TB). The diverse backgrounds of the team members allowed us to make the different assumptions and preconceptions explicit and helped ensure that our interpretations were grounded in the data [37].

Data collection

In the Spring of 2017, the two students (ES and EW) conducted exploratory, in-depth interviews. They developed an initial interview script and pilot tested with one resident (See Appendix 1 for the full interview script). During the interviews, only the participant and the two interviewers were present. All interviews were audiotaped, pseudonymized and transcribed verbatim by the students for analysis.

Data analysis

In the period 2020–2022, three researchers (GG, JB, AN) used a template analysis approach to code and analyze the data in a structured manner, following the steps proposed by Brooks et al [38].

The initial template was based on a priori themes and codes. Organizational Socialization theory served as foundation for deriving a priori themes, using Chao's individual tactics, defined as 'individual attempts to adapt to a new role' [22] and Van Maanen and Schein's organizational tactics, defined as 'strategies of the organization to help newcomers adapt' [23]. Within these a priori themes, we identified a priori codes covering the theoretical descriptions of the individual and organizational tactics [22, 23]. In addition to inductive coding, the use of a priori coding allowed us to systematically apply these well-defined concepts to the data, ensuring that we could both confirm the relevance of existing theory in this context and explore any emergent themes beyond the pre-existing framework. Additionally, a priori coding enabled us to maintain consistency in the analysis, given that the research questions were applied retrospectively to data collected earlier.

Two researchers (GG and AN) independently coded eight transcripts line-by-line. After coding every second transcript, GG, AN and JB met to compare and discuss the data analysis process and reach consensus. Based on the first round of coding, we modified the initial template, because the context in which the residents worked differed from the context in which the individual and organizational tactics have their roots (i.e., the context in which business graduates worked) [39, 40].

We slightly changed the descriptions of the themes by replacing 'tactics' with 'strategies' to stay very close to the wording of the interviewees. Although typical iterations occur between data collection and analysis, our process involved iterative reflections within the analysis phase. We engaged in ongoing dialogue among the co-authors, using insights from the initial data collection to inform our interpretations. The final themes comprised residents' perceptions of individual strategies they used and their experiences with organizational strategies to help them adapt to residency. During the data analysis process, the co-authors held regular meetings to discuss the data analysis process and refine the themes and codes.

Based on the final template, GG and AN coded the full data set. Thereafter, we mapped and discussed connections/patterns between and within the themes [37, 38]. In this part of the data analysis process, we discovered different levels of organizational strategies and how organizational strategies could impact residents' own adaptation efforts.

The coding process was supported by Atlas.ti 8 [41]. The first author kept an audit trail of the decisions made throughout the design, data collection, and analysis phases. This audit trail documented methodological choices and analytical decisions while also incorporating reflections from the original interviewers' master's theses. These reflections strengthened the connection between data collection and analysis [42–44].

Results

We will first report on individual strategies the residents used in their transition, then on their experiences with strategies other healthcare professionals used to facilitate their transition and, finally, on the residents' perceptions of the impact of organizational strategies on their own adaptation efforts (i.e. individual strategies).

Individual strategies residents used in their transition

We identified five individual strategies the residents used in interaction with other healthcare professionals to adapt to their new role and responsibilities: observing others, asking questions, experimenting, establishing social relationships and seeking information. Residents used these strategies to acquire knowledge on how to perform their new tasks, to behave appropriately and to understand their role in relation to those of other healthcare professionals. Each strategy is supported by corresponding quotes in Table 2.

One strategy, *Seeking information,* was aimed at the single goal of acquiring, refreshing or deepening their knowledge, while other strategies such as observing, asking questions, experimenting, and establishing social relationships had multiple goals. For example, residents used the strategy of *Observing others* to learn how to perform tasks and to mirror their peers' behavior. They used the strategy of *Experimenting* to understand their tasks and to understand their role in relation to those of other healthcare professionals. They used the strategies of *Asking questions* and *Establishing social relationships* to behave appropriately and understand the norms within the healthcare team.

Residents' experiences with organizational strategies to facilitate their transition

The residents described different strategies other healthcare professionals used to help them adapt. Our data covered all organizational strategies. Each strategy is supported by corresponding quotes in Table 3.

Some organizational strategies referred to *direct interactions with other healthcare professionals*, for example, whether the residents felt they were treated as individuals or as a group as a whole (collective – individual); whether supervisors or nurses approached the residents based on their level of training (sequential – random); and whether (and to what extent) the healthcare team created an open and approachable atmosphere or residents felt compelled to conform to the workplace norms (investiture – divestiture).

Other organizational strategies were interpreted as *resulting from decisions at system level,* for example, whether the introduction period was made explicit and formalized (formal – informal); whether role models or insiders were available (or not) for residents to learn from (serial – disjunctive); and whether the residency program was organized within a fixed or variable time frame.

Residents' perceptions of the impact of organizational strategies on their own adaptation efforts

We discovered that some organizational strategies impacted the residents' own adaptation efforts. Some organizational strategies seemed to facilitate and others seemed to hinder residents' efforts to adapt to their new role. Residents differed in whether they experienced a specific strategy as facilitating or hindering, as we will show in the following paragraphs, and corresponding quotes in Table 4.

The individual strategy of *observing others* was influenced by the availability of role models or insiders, such as peers or nurses. Some residents felt that the absence of role models gave them greater autonomy, while others found it hindered their adaptation, as they missed having someone to model their behavior after.

The individual strategy of *asking questions* seemed to be facilitated by the approachability of other healthcare professionals. Peers and nurses were often easily approachable, whereas the approachability of supervisors

Table 2 Individual strategies residents used in their transitions

Individual strategy	Description	Illustrative quote
Observing others	How to do their job, and how to behave as a doctor	**Excerpt 1:** "In the morning, you sometimes do the ward rounds on your own, and other times together [with another resident]. You often observe others and wonder 'Gosh how does that person do that'?" *(resident 6)* **Excerpt 2:** "Look, you learn from observing others. For instance, when you're doing a ward round and you're walking with all the supervisors and residents, and then another resident starts talking to her or his patient and the supervisor is talking to the patient. And you listen how they talk and how they approach patients, how they communicate the problems, and discuss that with the patient. You learn a lot, just by observing and listening." *(resident 2)*
Asking questions	How to behave and how to conform to group norms	**Excerpt 3:** "[…] because look, they're all mirrors. You don't see yourself, how you walk during ward rounds, what kind of attitude you have, how you communicate with nurses, and patients. For me in particular, because I also have a cultural barrier, and also a language barrier, so it's very important what kind of an impression I make on others. And I always keep asking a lot of feedback, from everybody. [Like on] this [my] feedback style, then you really think: 'Oh, am I really like this?' or 'People really see this from me and have such an experience with me, oh interesting!" Then you start reflecting on this feedback and being alert. The next time you're alert to that and make sure that it's going well and [your approach is] not much different from how others do it. I think this is very important, yes." *(resident 2)*
Experimenting	How to do their job, and how to interact with other health care professionals	**Excerpt 4:** "You have to find out what's your own working style […]. How you are going to do your work, how you are going to deal with patients, how you are going to deal with nurses, how you are going to deal with supervisors, and other colleagues. You have to find it all out, and that's quite a lot of work." *(resident 2)* **Excerpt 5:** "And the oncologists there have long working hours, they just scheduled family conversations during the evenings. And, ehm, in the beginning that was okay [I joined them], but at some point I said:'I don't mind you are doing that [having the conversations], but then you [have to make notes and] create your personal report yourself, because I'm going home'." *(resident 13)*
Establishing social relationships	How to become a member of the health care team	**Excerpt 6:** "You have to get to know the people. For instance, […] how do you approach that supervisor? Yes, you are, ehm. Does that person want me to prepare or learn in advance, or does that person want me to just think about it and, ehm, pass it [to someone else and learn from the discussion that follows]." *(resident 3)*
Seeking information	How to collect information about specialty-specific knowledge, or processes within the department	**Excerpt 7:** '[…] And also, because you're uncertain and don't know exactly, what's expected of you in terms of knowledge and [skill] level. I've often been thinking during the first year: 'I ought to know this, I'll look it up at home'." *(resident 6)*

and program directors varied. Examples of the approachability of supervisors that stimulated residents to ask questions were: making time for a feedback conversation, encouraging residents to choose their own route or rotations and encouraging residents to actively engage in patient-related discussions. In other situations, however, residents felt they had to adjust to the (implicit) workplace norms and behaviors, which prevented them from asking questions and made them feel they had to meet other healthcare professionals' expectations.

The individual strategy of *experimenting* seemed to be facilitated by the use of an informal organizational strategy, so absence of a formal structure. In such an atmosphere, learning took place within the social networks

Table 3 Residents' experiences with organizational strategies to facilitate their transition

Organizational strategy	Description	Illustrative quote
Collective	Being treated as (one of the) group of residents, or feeling part of the group of residents	"The transitioning to the academic hospital is challenging, as it is a large organization, impersonal, you are being trained, but in the beginning you don't have the feeling that people know you, especially because you're one out of 40 residents […]." *(resident 7)*
Individual	Being treated as an individual and receiving personal attention	"There were really a lot of approachable supervisors, who were also very education-minded. They let you make mistakes. First they listened to your story, and then [they] said what went wrong, or what might be improved. Just the right way of teaching. And not immediately cutting off [the conversation], when they felt it was shoddy work." *(resident 9)*
Formal	Efforts made by the hospital to ensure that residents meet the required level of knowledge and competence in patient care and PGME training	"Yeah, sure. There are […] what's good, is that you need to do a course […] where you learn to take care of acutely ill patients. That's just a very good course. And you need to complete it [that course] before you start doing shifts. And that's something that's very helpful to you as a beginning doctor". *(resident 6)*
Informal	Absence of any effort of the hospital to support residents in their roles as doctors providing patient care, or learners getting PGME training	"I don't know what kind of an introduction period I had [and how long it took], just a few days and then you'd just start working. If I had any doubts [or didn't know what to do], I could just ask, it wasn't a high-threshold [atmosphere], I could just ask my colleagues, [or] senior residents, that was even more easy." *(resident 16)*
Sequential	Being treated as a newcomer and, therefore, not being part of the professional group of residents from the beginning of resident training	"As a first-year resident, you're in a different place than the others [the senior residents]. That's very specific to this place. It sometimes makes you feel a bit, well, a bit isolated, like you're still in kindergarten and the others can already […]" *(resident 9)*
Random	Being approached as an experienced resident and, therefore, being part of the professional group of residents from the beginning of resident training	"Well, for example, when you have to think about it for a while or don't know it right away, or for them, most residents know that, you're just starting and have to look it up if you don't know the answer. Then you hear them [the nurses] let out a deep sigh and you hear them say 'I'm not a doctor, so you are the one who ought to know [this]', which is kind of implicit. In the end, it'll work out, but if something like this happens more often, it does something to you. *(resident 6)*
Fixed	Goal-setting is within a fixed time frame, regardless the individual needs	"In the first three months, when you're starting, you've three hours of spare time every Tuesday morning to do administrative work. You also get 60 min prior to a consultation with a new patient, and 30 min prior to a follow-up consultation. And then, after 3 months, there will be no spare time for administration anymore, and the time prior to a consultation will be reduced, so you'll only have 40 min prior to a [consultation with a] new patient and 20 min prior to a follow-up consultation, which doubles up. So then there's limited [preparation] time available." *(resident 12)*
Variable	Goal-setting is within a variable time frame, dependent on individual needs	"Yes, in the beginning, also during team meetings, the [supervisor] was taking the lead in conversations, and then I gradually took it over." *(resident 12)*
Serial	Availability of others from whom to learn the job	"And at work [in the clinical environment] nurses are used to a lot of new people coming in, but in spite of that, collaboration is very easy. These are positive things. In particular the neonatology department is good at training us. And that's just really nice, it makes the work really nice, that they're just busy. So these are the positive things, yes." *(resident 10)*
Disjunctive	Absence of others from whom to learn the job	"That you have to learn role-specific things, that's one thing you should be aware of beforehand. And those are the things everyone expects you to be able to do, and there's no active learning moment […] for example, if you don't know how to plan your day, nobody is going to help you, [nobody will explain] 'this is how outlook works'." *(resident 3)*

Table 3 (continued)

Organizational strategy	Description	Illustrative quote
Investiture	Important people such as supervisors and the program director(s) are approachable, and create an open atmosphere	"That's exactly right, because that's my experience too. When you started at the Oncology Department, there too, children with cancer died there too, but it's such a highly specialized department, that at handovers, there was always someone there to ask questions, at least at that time. That does make things easier." *(resident 7)*
Divestiture	In their interaction with supervisors, residents feel compelled to adjust to the supervisors' preferences	"And then, When you get into a training situation, then it makes sense. Those supervisors don't know you, and they're pulling the strings. And then, you feel worthless again, you can't do anything [right], it also feels like you're allowed to do far less, at least I thought so." *(resident 9)*

Table 4 Residents' perceptions of the impact of organizational strategies on their own adaptation efforts

Individual strategy	Organizational strategy	Description	Illustrative quote
Facilitating			
Observing others	Serial	Having a role model facilitated observing others	**Excerpt 1:** "Observing, yes, just observe how they do it. With difficult people [patients], for instance, how do you start a conversation without making things awkward right away? Or, erm, I was lucky to be guided by some experienced psychiatrists, who were a lot older, and close to their retirement, but who really have a wealth of experience. And that's really exciting, to be able to look over their shoulders. This doesn't happen quite often, due to time constraints. But if it works out, then it is very instructive. It also depends on your learning style, but I really like to observe others […]" *(resident 5)*
Observing others	Disjunctive	Absence of a role model prevents residents from observing others, which is perceived as facilitating	**Excerpt 2:** "In the ambulance, I work there as well, and I've been doing this for years, there I also learn things […], but then I learn from the situation and no one's observing me, or assessing me. Oh, that's great *(resident 8)*
Asking questions	Investiture	When other health care professionals were approachable, residents could easily ask questions	**Excerpt 3:** "Well, it's an open atmosphere [low threshold], you might say, you can ask everything. Asking [questions to] supervisors, it is, even though [you ask] something simple, it's no big deal. […] There's, of course, a functional hierarchy, but it isn't getting in your way." *(resident 4)*
Experimenting	Informal	An informal atmosphere facilitated experimenting behavior	**Excerpt 4:** "But as long as I meet their expectations, I can also say: 'But I also want [to do] that task, which is actually not part of my job [role] at all, but which I would like to do for once'. Then they'll say: 'Okay, fine, you do that.' There I have more opportunities to design my own training program." *(resident 3)*
Establishing social relationships	Individual	Knowing each other facilitated collaboration	**Excerpt 5:** "In hospital A, there's a different atmosphere, you know everyone, you know the people, the pediatricians, but also the physiotherapists, the psychologists, the dieticians, you know the whole team. So that facilitates your work, being a real part of the team." *(resident 7)*
Establishing social relationships	Collective	Feeling part of the group of residents contributed to a good atmosphere	**Excerpt 6:** "Well, what I find positive is that you work here with a large group of residents, so the atmosphere within the group is just very good. A lot of togetherness too. I think that's something very positive. And the nurses are used to work with new residents, but in spite of that [working with inexperienced residents] the collaboration is going very well. Those are positive things." *(resident 10)*
Hindering			
Observing	Disjunctive	Absence of a role model limited residents' opportunities to observe others	**Excerpt 7:** "[…] but you almost never get the chance to walk along with [job shadowing] your supervisor, you do your own tasks, so you can't really 'copy-paste' the supervisor's behaviors. In the OR you can, of course, but in the outpatient clinics you can't. And copying and seeing that [the behaviors of the supervisor in the outpatient clinic] may occasionally be educational as well, but also talking about cases and patients you see, you learn a lot from that too." *(resident 14)*

Table 4 (continued)

Individual strategy	Organizational strategy	Description	Illustrative quote
Asking questions	Divestiture	Feeling forced to adapt to the workplace norms prevented residents from asking questions	**Excerpt 8: "** […] That you sometimes don't dare to say anything, even though it would be very educational. And, that yes sometimes, they roll over you in the beginning, when you can't really say or do what you want of would like to do, [have no opportunity to discuss] how you can improve, how you feel about it. Often I thought afterwards: 'I should have said this, or should have done that'." *(resident 6)*
Experimenting	Informal	Absence of an introduction program forced residents to experiment, which was perceived as hindering the transition	**Excerpt 9:** "And also the shifts you weren't actually trained for, there was no [formal] introduction program. Particularly this was very tough for me." (*resident 6)*
Establishing social relationships	Individual	Absence of social relationships hindered collaboration	**Excerpt 10: "**At the beginning it was difficult, you don't know those people yet. Yes, they have certain way of working, and they see a new resident every few months. So that's sometimes difficult. Well, once you've been there for a while, you'll get to know them a little bit, [and] a little bit about what to expect. Then it gets better and better." *(resident 12)*
Establishing social relationships	Collective	Absence of social relationships caused residents being treated as a collective (part of the group of residents)	**Excerpt 11: "**Interaction with supervisors who don't know you and you're just a dime in a dozen [treat you as a collective], they see so many residents […] you just have to prove yourself again. These factors prove that you really feel like I can't do anything [right], I have to start from zero again, ehm, prove myself again, but also find myself in this organization. *(resident 9)*

surrounding resident's position and, thus residents were encouraged by their supervisors to set their own learning goals. Whereas some residents took advantage of the lack of formality, others did not appreciate it and felt that it hindered their adaptation efforts.

Residents often rotated to new workplaces, which complicated their efforts to *establish social relationships*. Being acquainted with each other facilitated collaboration. Absence of social relationships, however, hindered collaboration because residents and other healthcare professionals did not know what to expect from each other. Some residents felt seen as a generic resident rather than as a specific individual, and experienced this as an obstacle to forming social relationships with other health care profesionals. Feeling part of the peer group of residents was perceived to facilitate social relationships because it contributed to a pleasant working atmosphere and collaboration.

Discussion

Our study showed that TTR involves a dynamic social interplay between residents and other healthcare professionals [12, 13]. Through analysis of qualitative exploratory in-depth interviews, we found that residents used five individual strategies to adapt to their new role: observing, asking questions, experimenting, establishing social relationships, and seeking information. These strategies enabled residents learn how to perform their tasks, behave appropriately, and integrate into the healthcare team. Additionally, residents encountered various organizational strategies employed by healthcare professionals to facilitate their transition, which we identified through the lens of Organizational Socialization theory, using its six dichotomous tactics: collective–individual, formal–informal, sequential–random, fixed–variable, serial–disjunctive, investiture–divestiture.

A key contribution of this study lies in revealing how organizational strategies employed by other healthcare professionals directly impact residents' adaptation efforts. This interaction between organizational and individual strategies has not been explicitly addressed in previous research and extends the theory of organizational socialization by demonstrating how these strategies intersect [22, 23]. Moreover, our study highlights a previously underexplored complexity: residents differed in their perceptions of whether a specific organizational strategy facilitated or hindered their transition. This divergence underscores the importance of considering individual preferences in the balance between support and autonomy during residency training, as some residents benefit from greater independence, while others require more structured guidance.

Our findings indicate that individual strategies not only support residents' socialization into the health care team [45, 46], but also enhance their role-based performance by helping them acquire practical knowledge and skills. Similar findings were observed in undergraduate medical students, where strategies like seeking information and feedback, negotiating tasks and building relationships helped students' navigate their roles [24, 28]. Moreover, we showed that organizational strategies were enacted at both interpersonal and system levels. This aligns with previous research on nursing graduates and medical students, which emphasized the influence of supportive of senior staff and a safe learning environment [24, 25].

Additionally, the tension between support and autonomy was evident in residents' reflections on role models. Some residents felt that absence of a role model allowed them to exercise greater autonomy, while others found it hindered their learning. This raises important questions about whether residents were advocating for less role modelling (i.e. more independency) or merely adapting to a suboptimal situation. Program directors, however, did not consider the absence of a role model as a viable strategy [19]. In fact, in the United States (and likely in other contexts), the absence of role models is legally impermissible in educational settings, making it an unrealistic approach. While other studies have not addressed the absence of role models as a deliberate strategy, prior research highlights the tension between support and autonomy in residency training [2, 47, 48]. Often, residents' responsibilities do not align with their desired levels of autonomy, leading to perceptions that their duties are either too excessive or too limited [2, 47, 48]. This reflects the broader challenge of balancing educational support with independence. Supervisors, nurses and peers can consciously apply role modelling strategies to better balance residents' needs for autonomy and support. These insights can help both residents and healthcare professionals adjust their strategies to optimize transitions, while considering individual preferences and needs [19].

Practical implications

Three practical implications logically follow from the results of our study. First, we recommend residency program directors incorporate information about individual adaptation strategies into onboarding programs for residents. So far, these programs mainly focus on clinical aspects of residents' new role or reflective practice during transition periods through coaching or visual arts-based activities [4–7]. Second, knowledge and awareness of organizational strategies can inform the design of onboarding programs for residents. Decisions have to be made, for example, on whether the introduction period

will be formal or informal, whether the role of role models or mentors will be made explicit or not and whether the introduction period will be organized within a fixed or a variable time frame. Third, at interpersonal level, we recommend to let the entire health care team play a role in onboarding programs for residents. From the literature, we already know that nurses often take an important informal role in the onboarding of new residents [20]. To empower the entire healthcare team to play a role in residents' onboarding, we recommend that residency program directors develop interprofessional faculty development initiatives for supervisors as well as nurses, same-year and senior residents and administrative staff [49]. These initiatives should not only respond to the individual needs of residents, but also equip healthcare professionals with the skills to assess and adapt to residents' preferences for autonomous versus guided learning. Given the variation in how residents prefer to be supported during transitions, developing the ability to read and respond to these preferences is crucial for fostering effective onboarding and ongoing development.

Strengths, limitations and future research

A strength of our study is the inclusion of residents from multiple specialties, providing diverse perspectives on how social interactions influence TTR. Additionally, the multidisciplinary nature of our research group enriched the analysis by incorporating various professional insights, which contributed to a more comprehensive understanding of the socialization processes during residency.

Residents' socialization processes involve interactions with many other healthcare professionals, therefore future research should include (perceptions of) the entire interprofessional environment surrounding the resident, including supervisors, nurses, advanced practice practitioners, senior residents and peers. To improve TTR and promote collaboration with other healthcare professionals, it is essential that all health care professionals acquire knowledge of one another's work contexts and activities [50]. A possible lens to explore the perspectives of different types of healthcare professionals and help them understand each other's values and practices is using social capital theory and social network analysis, which allows for in-depth identification of interpersonal relationships and understanding of how these may influence TTR [51, 52]. Residents can, for example, be asked to describe challenging situations they experienced and how they utilized their social networks to navigate these challenges. This analysis will help identify key relationships that facilitate or hinder residents' adaptation and will provide a deeper understanding of how interprofessional teams can support each other during transitions.

Furthermore, our study noted peer-to-peer interactions as a potentially valuable component of residents' TTR, as reflected in Table 4, excerpt 6. However, the influence of these interactions on the choice of organizational socialization (OS) strategies was not a clear pattern in our findings. Future research could investigate how peer-to-peer interactions shape residents' OS strategies and adaptation processes. For instance, longitudinal studies could observe residents over time to capture how interactions with more experienced peers influence their coping strategies, professional growth, and integration into the clinical environment. Such studies could also explore whether intentional peer mentoring or peer-led initiatives positively impact the socialization process, offering practical recommendations for residency programs. Expanding on these directions, future studies should be broadened across GME systems and explore the impact of targeted interventions, such as structured mentorship programs or workshops that emphasize interprofessional collaboration. This would further our understanding of the mechanisms underpinning successful transitions and promote evidence-based practices to optimize TTR across varying contexts.

Our study also has some limitations. While it is reasonable to have interviewed 16 residents from 10 programs across two hospitals, it is important to acknowledge that such a convenience sample could miss perspectives from other residents in the same programs. We cannot determine whether the reactions of those interviewed are representative of all residents in these programs. However, our aim with a qualitative research design was not to generalize from a random sample, as in quantitative research, but to identify local patterns within the data. Future quantitative research could investigate the extent to which the strategies and adjustments of newcomer residents observed in this study are generalizable in a larger, random sample. Additionally, the interview script broadly addressed how second-year residents reflected upon their experiences during their first year, allowing us to ask deeper questions that responded to their answers. However, this retrospective approach relied on recall, which has inherent drawbacks, including a decline in the quality of gathered data and the risk of participants not consistently retaining detailed information about past events [53]. While this limitation might affect the data, a potential advantage is that reflecting on experiences after a longer time span allows for deeper examination and critical analysis of those events. Additionally, during the template analysis we decided to apply the theory of Organizational Socialization (OS), which may have reduced the depth of information gathered. However, this can also be considered a strength since OS theory contributed to a more in-depth understanding of

the socialization strategies used in TTR [42]. Moreover, using existing theory as a lens to inform data analysis is common in qualitative research based on a constructivist paradigm [30].

Conclusion

A smooth transition to residency requires a strategic approach from both newcomer residents and other healthcare professionals. Residents can use different individual strategies and other healthcare professionals can support them. We identified five *individual* strategies that helped residents learn how to perform the tasks that belonged to their new role, behave appropriately and understand their role in relation to those of other healthcare team members. The residents mentioned different (organizational) strategies other healthcare professionals used to help them adapt, which we could cluster into how other healthcare professionals approached them and how the system around their training program was organized. This study revealed that organizational strategies can positively or negatively impact residents' own adaptation efforts. However, residents differed in perceptions of whether a specific organizational strategy was facilitating or hindering.

Abbreviations

UME	Undergraduate Medical Education
GME	Graduate Medical Education
OS	Organizational Socialization
TTR	Transition To Residency
ES	Eva Schaafsma
EW	Eline Wijnhoud
JP	Jan Pols
GG	Gerbrich Galema
RD	Robbert Duvivier
JB	Jasperina Brouwer
GW	Götz Wietasch ()
DJ	Debbie Jaarsma
AN	Aly Najak
TB	Tineke Bouwkamp-Timmer

Supplementary Information

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Supplementary Material 1.

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Related abstract presentations

Galema G, Brouwer J, Jaarsma D, Wietasch G, Duvivier R. (2022, August 27–31). *Organizational socialization of medical residents: An interplay between the resident and the health care organization.* [Conference presentation]. AMEE 2022, Lyon, France, 2022. p. 184–5. Available from: https://amee.org/conferences/amee-2022

Galema G, Brouwer J, Jaarsma D, Wietasch G, Duvivier R. (2022, October 27–29). *Organizational socialization of medical residents; The interplay between the resident and the department.* [Poster presentation] International Conference of Residency Education Conference 2022, Montréal, Canada.

Galema G, Brouwer J, Bouwkamp-Timmer T, Jaarsma D, Wietasch G, Duvivier R (2023, May 11–12). *Aanpassen aan de nieuwe rol van arts-assistent, arts-assistenten over hun eigen strategieën en die van andere zorgprofessionals met Organizational Socialization als analytische lens.* [Conference research paper presentation] Netherlands Association of Medical Education, Maastricht, The Netherlands.

Authors' contributions

Conception and design of the study: GG, JB, RD, TB, DJ, GW. Analysis of data: GG, JB. Interpretation of data: GG, JB, RD, TB, DJ, GW. Drafting the manuscript: GG. Revising the manuscript critically for important intellectual content: JB, RD, TB, DJ, GW. Final approval of the version submitted: GG, JB, RD, TB, DJ, GW.

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Data availability

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

Declarations

Ethics approval and consent to participate

This study was carried out in accordance with the Declaration of Helsinki. Ethical approval was obtained from the ethical review board of the Central Ethics Review Board of the University Medical Center Groningen (register number: 20190064). All participants provided written informed consent.

Consent for publication

Not applicable.

Competing interests

The authors declare no competing interests.

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