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FROM INTUITION TO PROFESSIONALIZATION: A QUALITATIVE STUDY ABOUT THE DEVELOPMENT OF TEACHER IDENTITY IN INTERNAL MEDICINE SENIOR RESIDENTS

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ABSTRACT | Objectives: Professional identity can be defined as a developmental process. Literature suggests that residents aiming to practice in a teaching institution should receive support for the development of teaching competencies as much as they do for medical competencies, but there is limited data on how to recognize teacher identity development in residents. Our study focused on the manifestations of teacher identity development in a group of senior residents in a four-week optional pedagogy rotation. In particular, we were interested in seeing teacher identity development towards the end of the residency program, at a time when clinician identity begins to consolidate. **Methods:** A qualitative and exploratory approach guided our study design. Participants were internal medicine residents, (from Yr4 to Yr6) at University of Montréal, who intended working in a university setting and were interested in developing a teaching project. Focus groups were held at three separate moments: 1) before rotation, 2) after rotation and, 3) six months after rotation. Direct content analysis was chosen to analyze our findings. **Results:** We observed the emergence and the evolution of teacher identity and furthermore, we identified six development pathways, which underpin the development of teacher professional identity: 1) From awkward and stereotyped usage to mastery of concepts and teaching techniques, 2) From the reproduction of implicit norms of the clinical setting to the establishment of pedagogical norms 3) From the feeling of powerlessness in teaching to a feeling of mastery and taking initiatives 4) From teaching intuitively to reasoning pedagogically 5) From a teacher based paradigm to the discovery of the learner-centered paradigm and 6) From an emerging identity as a clinician to the simultaneous construction of twin identities: clinician and teacher. Six development indicators providing operational cues to help recognize different facets of teacher identity development were then identified. **Conclusion:** The identity development pathways allowed us to gain deeper insights about how teacher identity develops in internal medicine residents toward the end of a pedagogical rotation. It is our hope that these findings will help educators recognize and support the development of teacher identity in their residents.

Keywords: teacher's identity development ;senior residents; faculty development

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INTRODUCTION

Professional identity can be viewed as "a developmental process, during which novices acquire specific knowledge and skills, develop new attitudes and values, and take on a self-concept associated with the new career role"[1,2]. This identity is comprised of external elements coming from the discipline, and internal ones coming from within the individual[1,3-5].

Models of professional identity development[6], highlight the key roles of the social structure - the specific training context - and the interactions with others in the construction of the professional self[5]. Physicians engaged in clinical teaching tend to identify less with their teaching role and have an unclear conception of what it entails[7,8].

Based on qualitative evidence suggesting that excellent clinical teachers have a strong sense of teacher identity[9], Starr et al.[1,2] uncovered evidence of internal and external elements of teacher identity in a group of experienced faculty members identified as good teachers. They described seven features of teacher identity: 1) intrinsic satisfaction derived from teaching, 2) knowledge and skills about teaching, 3) sense of belonging to a community of teachers, 4) receiving rewards and recognition for their teaching, 5) believing that being a doctor means being a teacher, 6) seeing teaching as a responsibility, and 7) sharing clinical expertise[1].

There is increasing interest in identifying factors that influence the development of physician professional identity to leverage them into medical education[4,10-13]. Previous studies suggest that identity development is mainly social and relational in nature[5]. However, there is limited data on how residents develop their teaching identity during their training[4,14,5].

Objective

Our study aimed to explore how senior residents, participating in a pedagogy rotation, perceive the process of teacher identity development.

METHOD

Based on Starr et al.'s[1,2,16] conceptual framework, we chose directed content analysis to attain our objective, which enabled us to validate and extend the Starr et al.'s framework[18]. Our approach was exploratory and qualitative, as qualitative data are best suited for revealing and exploring a new field[17].

Intervention

Our study focused on an optional 4 week pedagogy rotation at the Faculty of medicine at the University of Montréal, as well as the six-month period immediately following the end of the rotation.

The rotation's objectives were to acquire teaching knowledge and skills and to use them in a clinical teaching environment. Residents were freed from clinical work during the rotation but were expected to be in their wards to teach clerks for one day each week.

The rotation comprised six different activities facilitated by rotation educators and members of the research team (SL, GG, MCA): 1) three weekly group meetings, each lasting half a day, 2) selected reading of articles, 3) supervision of clerks and targeted feedback, 4) targeted observations of educational activities, 5) supervised reflexive writing exercise, and 6) development of a pedagogical intervention to be implemented in their wards[9,16,19,20].

Participants

5 residents (1x Yr4, 3x Yr5 and 1x Yr6), two males and three females, were approached verbally by the non-teaching author (NF) to participate in this study. This represented 18% (5/28) of the total senior residents in the internal medicine program at that time. In spite of being at a teaching hospital, none of them had a clear view of their future role as teachers and all gave their written consent to participate in the study.

Data collection

Ninety minute focus groups were held at three separate moments in the hospital: 1) before rotation, 2) after rotation and 3) six months after rotation, in order to express and confront opinions, beliefs and attitudes concerning the object of study[21-23]. Focus groups were facilitated by a medical education researcher (NF) unacquainted with rotation participants and discussions were audio recorded and transcribed into verbatim documents. Safeguards were taken to ensure participant anonymity. The focus group interview guide was based on Starr et al.'s seven themes and previously pretested with fellow clinicians[1,2].

Data analysis

Starr's et al.'s conceptual framework[1,2,16] helped us determine the initial coding categories, which were analyzed by three authors (SL, GG & MCA) using Atlas-TI software. After separately coding the transcripts, researchers discussed the coding until full agreement was reached. We also searched for additional themes that might emerge from the material to further refine the theory. Finally, we discussed our results and agreed on six final themes.

Ethical approval

The university Research Ethics Board approved our study.

RESULTS

As data analysis progressed, Starr et al's. framework factors rapidly emerged; however a more dynamic perspective on the residents' teacher identity development began to unfold. The following section presents this perspective, designed as six teacher identity development pathways.

1. The gradual acquisition of teaching vocabulary and concepts

In the first focus group, participants scarcely used pedagogical vocabulary. During the second focus group, at the end of the rotation, participants started to discuss basic pedagogical concepts. Signs of emerging awareness of the underlying rationale of teaching were evident, indicating that a shift from intuitive practice to integration of educational concepts was occurring.

"Just the fact that we understood a little bit more about what we were doing, instead of doing it routinely, without really knowing what we were doing (…) I can adjust to be more efficient in certain situations." (FG2, lines 49-53).

Finally, in the focus group held six months after the rotation, we observed that the intuitive teaching model had given way to a more thoughtful and targeted approach:

"Before, teaching meant transmitting knowledge, asking the student questions. So, [now I have] the capacity to identify problems and adopt the appropriate strategy to tackle them" (FG3, lines 95-103).

The contrast in the way participants expressed themselves with regards to their teaching, led us to believe that participants had moved from awkward and stereotyped usage to mastery of concepts and teaching techniques, reflecting a growing professionalization of the teaching practice.

2. Moving away from implicit norms about teaching in a clinical rotation

At the beginning of the rotation, participants revealed their tendency to blindly reproduce the implicit norms of their environment, such as the greater emphasis given to medical activities and the perception that teaching takes up valuable time from clinical work or even that pedagogy is not all that important.

"You can't manage something that is urgent (…) and at the same time do some on-the-spot teaching". (FG1, lines 35-38).

"The attendings are not too demanding about teaching". (FG1: lines 195-197)

Gradually, participants came to question these implicit norms and related circumstances when they identified situations ill-suited from a pedagogical standpoint. What became apparent in the second focus group, was that residents perceived that the rotation had provided valuable strategies to move away from implicit norms.

"Now, we have strategies….Now we can teach in difficult circumstances, in emergencies. With our time constraints, we thought this was not possible. But now… we are better equipped." (FG2: lines 713-717).

The third focus group revealed that participants had acquired the potential to successfully challenge these norms and become agents for change, influencing their colleagues and setting.

"Having had this training (…) I often discuss with attendings that aren't necessarily interested and identify situations that were all wrong in terms of learning." (FG3, line 177)

These participant observations gradually questioning tacit norms in the clinical setting struck us as important. Hence, we labeled this development as moving from reproduction of implicit norms of the clinical setting to the establishment of pedagogical norms.

Becoming aware of their power to enact change

At the beginning of the rotation, participants felt powerless to help students who had difficulties.

"My weak spot is to find alternative teaching approaches to better suit students that don't function like I do." (FG1, line 191).

Towards the end of the rotation, the participants had become aware of the fact that not all students are alike and that consequently not all teaching techniques will work. The following excerpt, from the second focus group, speaks of a growing feeling of competence and assurance, especially with regards to their role as a teacher. We also observed that their newfound mastery of teaching could be a source of motivation and satisfaction.

"It's a feeling of competence, (…), it's more pleasurable to do it because we feel more comfortable in our role as teacher". (FG2, line 74).

Six months after the rotation, participants reported trying to look for potential teaching situations and to adapt their interventions according to the students' needs. This signaled that there had been a shift from the "one size fits all" model of teaching to a more targeted approach.

"Since the rotation, I think I am better at identifying the teaching situations than before when I did it automatically….and, I am better attuned to the real needs of the person." (FG3, line 71).

These changes reflected a growing sense that their actions "can have an impact" (FG2, line 80-81) and that this could be a source of motivation. Hence, we suggest a third development pathway that tracks change from the feeling of powerlessness in teaching to a feeling of mastery and taking initiatives.

Emerging pedagogical reasoning

At the beginning of the rotation, participants clearly stated that their pedagogic interventions were heavily influenced by their personal relationship with the learner.

"There's a lot of instinct, lots of trial and error in my technique based on who is in front of me." (FG1, line 207-211)

The following excerpt, from the second focus group, illustrates a gradual awareness that teaching requires some competence.

"We talked in the beginning that we had the impression we have a sort of vocation or some natural talent, but now we will think of this [in terms of] competence." (FG2, line 444).

Participants came to see that effective teaching required a reasoned approach. The following statement during the third focus group, suggests that pedagogical reasoning had taken a firm footing.

"When I am in front of someone who is struggling, (…), (…) I feel better prepared to define (….) where the problem is and try to tailor my interventions whereas in the past…I'd say it doesn't work, he's [the

resident] not very good." (FG3: lines 53-58)

Thus, in the course of the rotation, participants migrated from intuitive teaching, to a pedagogical analysis of the student's difficulties and the choice of a suited teaching method. This transformative change accounts for the fourth pathway: from teaching intuitively to reasoning pedagogically.

From a teaching based paradigm to the discovery of the learner centered paradigm

In the first focus group, participants talked about their pedagogical role in terms of a transfer of knowledge according to a vertical teacher-centered model. Residents valued their teaching by the quantity of medical knowledge they transmitted.

"I ask myself questions: am I teaching enough? Am I showing him enough stuff?" (FG1, lines 67-69)

Towards the end of the rotation, participants had clearly moved beyond this "vertical model" as shown in this excerpt from the second group.

"I realized that my method of teaching was more vertical (…) I realized that I had something to gain from interactions with my students." (FG2, lines 270-273)

Six months after the rotation, their statements clearly signified that they were aware of the existence of a different paradigm for teaching.

"Since the rotation, I think I identify teaching opportunities more than I did before (…) …and I listen to the real needs of the person." (FG, lines 71-75).

The fifth pathway that emerged in our analysis tracks a shift from a teacher-based paradigm to the discovery of the learner-centered paradigm.

The simultaneous construction of twin identities: clinician and teacher.

Participants in our study, as opposed to those of the Starr et al. study, had not yet completed their medical training, thus their clinical identity was still being shaped. As the rotation progressed and their teaching skills developed, their identity as clinical teacher gained salience and the participants felt the need to better master pedagogical knowledge and skills to properly fulfill their role as teachers.

They also developed an enthusiasm underlying their identity development, discovering not only the existence of a body of knowledge about medical education, but also that of a relevant and rigorous scientific literature.

"I feel like going to read up on this. It gave me a taste of pedagogy." (FG2, lines 41-43)

"There was a definite awakening during the teaching rotation." (FG3, line 118)

During the pedagogical rotation, the senior residents also recognized the reciprocal influence of one role on the other. The following excerpts from the second focus group reflect participants' growing perception of the clinician and the teacher identities, of the advantages of combining the two roles and the necessity to be competent in both.

"This teaching, if we want to make it effective, we must master these competencies and use them (…)." (FG2; lines 255-258)

Participants in the rotation developed a sense of belonging to a community of teachers mainly through the way others looked at them.

"As if all of a sudden you became a resource person in some way: people come to see you for small things, sometimes (…) And that, I think, coming from others can certainly contribute to the identity that we are building for ourselves." (FG3, lines 150-153).

That participants realized that developing teaching competencies helped them feel more comfortable in their role of teaching physicians, one role benefiting the other, leads us to suggest the sixth identity development pathway: from an emerging identity as a clinician to the simultaneous construction of twin identities: clinician and teacher.

DISCUSSION

This study has allowed us to deepen our understanding of how teacher identity develops in senior residents. Our findings are coherent with the external and internal changes defined in the literature on professional identity[3,16] and the evolution of the "ways of being and relating in professional contexts" described by Goldie[5].

Identity development indicators

Because pathways reflect transformations, which are relatively abstract, we felt the need to identify a salient feature for each one. These features describe concrete manifestations of changes taking place that can easily be recognized by residents, clinical educators and rotation instructors. Thus, we suggest six development indicators that highlight teacher identity development pathways and provide operational cues to help recognize different facets of teacher identity development. These pathways and indicators reflect the changes that affect not only the teaching competencies and attitudes of participating residents, but also their perceptions of teaching and their conceptions of themselves as clinicians. They go beyond the themes identified by Starr et al.[1] in that they describe the development process dynamically. Table 1 summarizes the six development pathways and indicators that highlight teacher identity development pathways.

Table 1. Identity Development Pathways and Indicators

Identity development Pathways	Indicators
From awkward and stereotyped usage to mastery of concepts and teaching techniques.	**New ways of intervening** *Mastering concepts and techniques in teaching*
From the reproduction of implicit norms of the clinical setting to the establishment of pedagogical norms.	**Professionalization of the teacher role** *Internalization of pedagogical principles*
From the feeling of powerlessness in teaching to a feeling of mastery and taking initiatives	**Emergence of a feeling of mastery and pleasure** *Emergence of mastery and initiative in teaching practice*
From teaching intuitively to reasoning pedagogically	**Recognition of teaching opportunities** *Emerging pedagogical reasoning that is targeted and context specific*
From a teacher based paradigm to the discovery of the learner-centered paradigm.	**New ways to support learning** *Adherence to a student-centered learning paradigm*
From an emerging identity as a clinician to the simultaneous construction of twin identities: clinician and teacher.	**New ways of working** *Simultaneous construction of two professional identities.*

Construction of two professional identities

Participants expressed the advantages of combining two roles; their statements illustrate how simultaneous development can be reciprocally beneficial for the development of twin identities. Given that senior residents' clinician professional identity is not yet stabilized in the early stages of their career, the opportunity afforded to foster the simultaneous construction of clinician and teacher identities is compelling. In this view, we think that faculty development programs should single out senior residents as potential teachers, and support the development of the two identities early on.

Strengths and weaknesses of the study

Our study sample raises two important issues. The first is that we deliberately took the group as a social

entity and not as a collection of individuals. Hence, individual characteristics are not accounted for. Secondly, because of the small number, participants were aware that instructors could easily identify them by the ideas expressed. This may have influenced their answers and the investigators' interpretations. However, the trust that was created during the rotation between instructors and residents, as well as the rigor of our study allows us to have some confidence in the validity of our results.

All participants were residents from the same residency program: Internal medicine. We found that this facilitated the development of their professional identity as teachers in that they could refer to their common physician identity, sharing operating norms and common experience of supervising students. This leads to the question of transferability. We believe that our results are likely generalizable to residents in other specialties, but further research would be required to explore potential differences and similarities.

Finally, it would be interesting to identify the factors of the rotation that most fostered the development of teacher identity. Unfortunately, we are unable to differentiate these. The most likely factors are that residents were freed from clinical duties during the one-month rotation and that the rotation was organized so that residents stay in their wards where they can put in practice their newly acquired pedagogical skills. This supported the transfer from the academic setting to the workplace[24].

CONCLUSIONS

As Goldie indicated, education in its broadest sense is about the transformation of the self into new ways of thinking and relating[5]. If we consider becoming and being a clinical educator a developmental process[19] it behooves us to emphasize the development of competencies required for the teaching role. If we aim to develop strong and resilient professional teacher identity in future clinician teachers, use of the development pathways and associated indicators appears fundamental. Furthermore, this echoes Cruess et al.'s recent recommendations that supporting professional identity development should be a primary objective of medical education[25].

AUTHOR CONTRIBUTIONS

MCA, SL, GG and NF have made substantial contributions to the conception and design, or acquisition of data, or analysis and interpretation of data; 2) MCA, SL, GG and NF have been involved in drafting the manuscript or revising it critically for important intellectual content; 3) MCA, SL, GG and NF have given final approval of the version to be published.

COMPETING INTERESTS

No financial, legal or political competing interests with third parties (government, commercial, private foundation, etc.) were disclosed for any aspect of the submitted work (including but not limited to grants, data monitoring board, study design, manuscript preparation, statistical analysis, etc.).

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