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RESEARCH ARTICLE

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Taking the next step: How student reflective essays about difficult clinical encounters demonstrate professional identity formation

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Abstract

Background: Difficult clinical encounters pose emotional and behavioural challenges for medical students. Unless resolved, they threaten students' professional competence and well-being. Learning how to humanistically interact with patients perceived as "difficult" is an important component of the developmental process that underlies professional identity formation (PIF).

Methods: This study used thematic analysis to examine reflective essay data from the same set of students ($N = 69$), first in their third year and then in their fourth year of training at a US public medical school. Analysis focused on how student perceptions of patients', preceptors', and their own behaviour, attitudes, and emotions in difficult patient care situations evolved over time, and how such evolution contributed to their professional growth.

Findings: Students identified clinical predicaments influenced by their own emotions and behaviour, as well as those of patients and preceptors. In response to patients perceived as angry, rude, and uncooperative, students described themselves and their preceptors primarily as engaging in routine medical behaviours, followed by expressions of empathy. These encounters resulted in residual emotions as well as lessons learned. Fourth-year students reported more empathy, patient-centeredness, and patient ownership than third-year students. While student-physicians grew in professionalism and compassion, they also noted unresolved distressing emotions post-encounter.

Conclusions: From third to fourth year, medical students undergo a process of professional growth that can be documented at a granular level through their perceptions of themselves, their patients, and their preceptors. Despite positive

Nicholas Freeman and Johanna Shapiro contributed equally to this article.

Title inspired by the following quote from a student's essay in our sample: "From this experience, I learned how big of a difference it makes to take the extra step and know your patient as a person, not as a diagnosis. We are so often preoccupied with the technical aspects that we forget the very human details."

professional growth, students' lingering negative affect merits attention and support from clinical teachers.

1 | INTRODUCTION

Difficult clinical encounters are interactions in which patient and/or provider experience negative emotions.[1] They can pose emotional, attitudinal, and behavioural challenges for medical students. Unless resolved, they threaten students' professional competence and emotional well-being by engendering personal and professional uncertainty.[2] The inability to manage difficult clinical encounters has negative implications for future physician–patient relationships, physician wellness, and patient care.[3] Learning how to humanistically interact with patients perceived as "difficult" is important in professional identity formation (PIF).

Physicians tend to locate the causes of a difficult clinical encounter within the patient,[4] with less attention paid to physician, relational, and institutional factors.[5] Difficult encounters can create more and less efficient work for physicians and contribute to a sense of loss of control in the workplace.[3] They can also lead to physician feelings of helplessness, frustration, and burnout.[5] Additionally, challenging patient encounters are associated with increased healthcare utilisation by patients and decreased patient satisfaction.[4]

Little research exists regarding medical student perceptions of difficult clinical encounters. Some studies offer causal explanations of difficulty based on factors such as patient characteristics and work culture.[6,7] Difficulty can also come from medical students' uncertainty about their clinical skills and disagreements with another provider's treatment .[2,8] In one study, medical students' perceptions of patients as "difficult" led to less empathy, poorer care, and more diagnostic errors.[7]

The concept of PIF[9,10] provided a framework for this study. In the context of medicine, PIF is the ongoing, self-reflective "foundational process one experiences during the transformation from lay person to physician".[11] PIF is multidetermined and dynamic, consisting of various stages, albeit with situation-specific reversals. It is influenced by personal backgrounds, values, expectations, interests, goals, relationships, role models, the formal and hidden curricula of medical education, healthcare delivery systems, and larger social forces.[12] A growing body of data identifies role models and students' evaluation of their professional role and responsibilities in their clinical experiences as key factors in PIF.[13] When medical students encounter challenging circumstances, they are forced to develop a more complex lens as professionals.[14] These new ways of viewing a clinical situation improve their ability to question assumptions, think critically, attend to emotions, and explore multiple perspectives.[13] Figure 1 depicts a modified version of Cruess et al.'s PIF model where specific stages of PIF are presented.[10] Cruess et al. in turn drew on Kegan's stage theory of identity development,[9] in which Stage 0 pertains to infancy and Stage 1 focuses on young children's issues of impulsivity. Stage 5 represents a level of self and other awareness that emphasises deeply interconnected worldviews and is rarely seen before mid-life. Stages 2 through 4 examine young adult developmental concerns and are considered most relevant to medical students.[10]

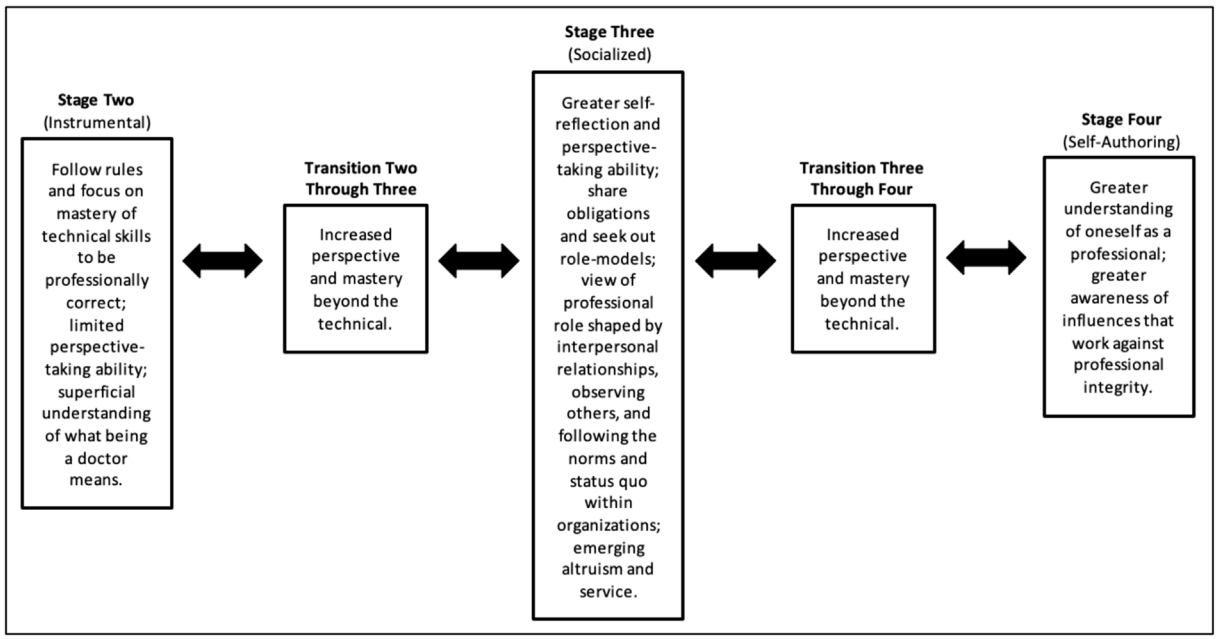

FIGURE 1 Modified professional identity formation model.

In Stage 2, individuals can assume professional roles but are primarily motivated to follow rules and to be correct; self-reflection is low and emotions are not examined.[10] This stage has been called "instrumental"[12] because it is characterised by right-wrong thinking, limited perspective-taking ability, and an emphasis on mastery of technical skills. Lewin et al. explain that individuals in this stage are focused on navigating the rules that govern their world so as to secure personal acknowledgment and avoid punishment.[15]

In Stage 3, individuals are able to view multiple perspectives simultaneously and begin to subordinate self-interest to the welfare of others. In this stage, people tend to follow the norms and status quo of their organisations. They adhere to group standards to strengthen relationships with and be accepted by members of perceived high-status, powerful groups (i.e., residents and attendings).[15]

Stage 4 describes individuals who can assume a professional role while evaluating its norms and standards in terms of personal principles and values. Kalet et al.[12] define this stage as characterised by awareness of the capacity to make choices that support professional integrity regardless of institutional expectations. Individuals in this stage critically evaluate their social environment based on personal authority and independent judgement.

Despite a well-developed theoretical framework and many articles describing the general process of PIF in medical students, the scholarly literature lacks a granular investigation of how PIF evolves during clinical training. We believe that if issues of transition between PIF stages are more deeply understood, then teaching and supervision can be tailored to the needs of students as they face difficult clinical interactions at different stages of development. Thus, in this study, we conducted an intensive analysis of reflective essay from the same cohort of students, first as third-year medical students and then as fourth-year medical students. Our aim was to address the following questions: (i) How do medical students in their clinical years perceive patients, preceptors, and themselves in difficult clinical encounters; (ii) do these perceptions change from third to fourth year?; (iii) do students evolve from Year 3 to Year 4 in terms of their PIF?

2 | METHODS

2.1 | Study setting and data collection

This research used reflective essay data from students at a US public medical school, in a 4-year medical program in which the first 2 years emphasise didactics and the last 2 years concentrate on hospital- and clinic-based training. Students completed essays during their third-year Family Medicine clerkship as well as during a fourth-year Art of Doctoring elective, which typically enrolled about 70% of the fourth-year class (74 out of 106). The essays were required in both courses but were not graded and did not affect students' final course grade. The directions for the essay were as follows:

"Write a brief reflection about a difficult interaction with a patient. A 'difficult' encounter may be one in which you experienced negative feelings (frustrated, sad), positive feelings (challenged), or both; and/or describes a situation which had an unsatisfactory outcome or posed a challenge, or one in which there was a barrier of language, culture, or class."

2.2 | Recruitment

Fourth-year students received an email asking for permission for the anonymous use of their essays from both the third- and fourth-year courses in a research study about difficult clinical encounters, which was described in detail. They could decline participation by email, but only three did so.

2.3 | Data analysis

Thematic analysis was selected because research indicates that reflective writing provides insights into students' perceptions of their interactions with patients and preceptors [16,17] and that subjective impressions of patients influence subsequent interactions and decisions.[18] Over a 9-month period, we analysed 69 paired essays until achieving theoretical saturation of the data (i.e., no new themes were identified).

Using the qualitative data analysis (QDA) software Dedoose, we engaged in flexible coding[19] to deductively code essays based on themes from a previous study on student perceptions of difficult clinical encounters[16] that included student views of patients', preceptors', and their own attitudes and behaviours. Additional inductive codes emerged from the data as well that were also applied to our analysis (see Appendix A for examples of the main codes used). We considered the frequency with which various codes appeared in the essays as simply an indicator of potential themes to explore further as findings.

Conceptualisations of PIF in the literature guided our methods in the following ways: Contemporary constructivist theories of identity formation define identity as "a dynamic process of continual interactions within social and relational environments".[20] This influenced our focus on how PIF might evolve during the clinical years. We also developed codes that were sensitive to change, such as students moving from the periphery to more centrality in professional responsibilities.[11] Further, we incorporated codes that reflected students' perception of role models and various dimensions of patient care experiences, since these are regarded as essential to PIF.[13]

2.4 | Trustworthiness

Essays were coded by one investigator and quality controlled by another. Discrepancies were discussed until consensus was reached. We minimised bias through triangulation of investigators.[21] Our team of researchers included a professor of family medicine trained in psychology, a sociology graduate student, a medical student, a genetic counselling graduate student, and a pre-medical student. These diverse disciplinary perspectives enabled us to compare findings and verify reaching the same or similar conclusions. To monitor team

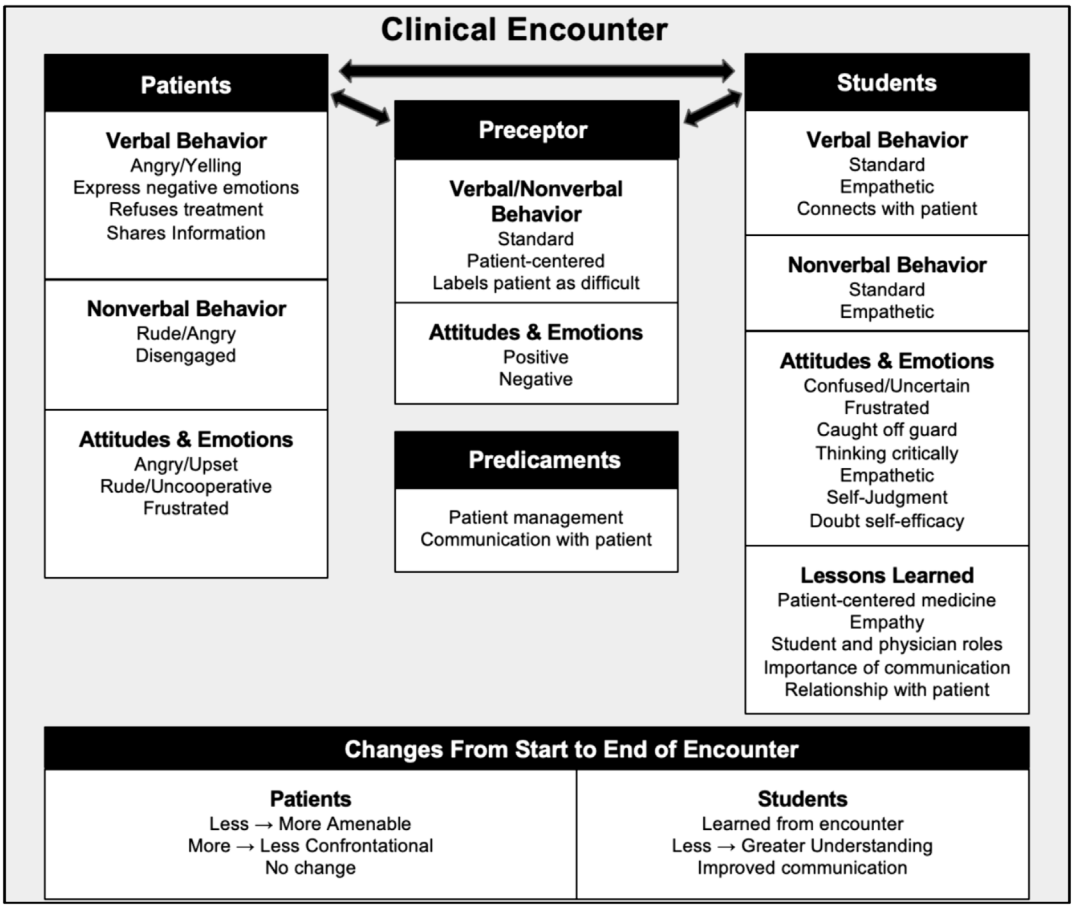

FIGURE 2 Key elements of the difficult clinical encounter. *Note*: arrows in the "Changes From Start to End of Encounter" section indicate directionality, but the direction, while always positive, does not always mean an increase in frequency (e.g., "more to less confrontational").

reflexivity,[22] we kept personal notes on our thoughts and feelings regarding the project, and periodically shared insights. For example, when one researcher noted their bias in favour of patients, this led to a discussion about how it might skew the coding. Another researcher mentioned how their background as a pre-med student could impact their data interpretation in a way that favoured medical students.

2.5 | Ethics approval

This research was reviewed and approved by our institutional review board (protocol HS #6657) and by our institution's FERPA (Family Educational Rights and Privacy Act) office, which reviews all student-related research to protect student privacy.

3 | RESULTS

3.1 | Medical student and patient characteristics

Sixty-nine students participated in the study, and 41 of the students (59.5%) were female. For privacy, all essays were blinded for any other identifying student characteristics prior to analysis. Student essays did not reliably identify patient sex, ethnicity, or age. Our patient population is 72% Latinx, 67% have only basic state/county insurance or no insurance, and 30% are at 200% of the federal poverty level or below.

3.2 | Overall student perceptions of difficult clinical encounters

Figure 2 presents a conceptual model summarising the main components of students' perceptions of their difficult clinical encounters along with the relationships between components.

Difficult encounters were organised around a perceived predicament, i.e., a dilemma that could not be easily resolved from the student's perspective. Encounters had three central actors: (i) the preceptor, who guided and participated in the encounter; (ii) the patient, who was the focus of the encounter; (iii) the student, who interacted with both patient and preceptor. Every clinical encounter also had an "aftermath" for the student—residual emotions and lessons learned. This model provides a guide for understanding the following results.

3.2.1 | Student perceptions of predicaments

Patient management and communication were the most frequent predicaments students identified. Patient management referred to medical challenges with patients, while communication problems often arose because of miscommunications/misunderstandings between patients and students.

3.2.2 | Student perceptions of patients' verbal and nonverbal behaviour and attitudes

Students most often saw patients as angry, uncooperative, and rude. A smaller number of patients were described as either anxious or cooperative.

3.2.3 | Student responses

To resolve their predicaments, students responded verbally and nonverbally. Most frequently, their responses were standard behaviours, or behaviours routinely expected of medical students such as greeting the patient, washing their hands, taking a history, performing some physical examination functions, and providing information. Far fewer verbalisations, although next most frequent, were expressions of empathy and efforts to connect with the patient.

"Later in the day, I returned to his room. I sat next to him, asked how he felt, and said nothing more. Reflecting on how I was previously occasionally annoyed by his rambling, in this moment I let him speak … and affirmed that we were there to help him and felt terrible that in the process had hurt him." (4062)

Reflecting on how I was previously occasionally annoyed by his rambling, in this moment I let him speak.

3.2.4 | Student emotional states

While students were demonstrating behaviours of professional competence and empathy, their emotional state was often confused, uncertain, overwhelmed, helpless, or frustrated.

"It is hard in these cases not to be mad that the patient appears to be lying or deceiving. I felt used and caught myself dismissing all of his pain as a lie for disability." (3028)

I felt used and caught myself dismissing all of his pain as a lie for disability.

3.2.5 | Student views of preceptors

Preceptors modelled how to manage these difficult encounters. Students most often described preceptors as engaged in standard medical behaviours. When preceptors expanded their interactions, they tended to be perceived as patient-centred. Most often, students referred to preceptors in positive terms, though negative perceptions were almost as prevalent.

3.2.6 | Lessons learned

Students described lessons from these difficult encounters. These highlighted patient-centeredness:

"But by honing in on what put George the most at ease, I was able to build a connection with him that allowed me to be part of his healing process and help him get through an otherwise stressful part of his ED stay." (4047)

I was able to build a connection with him that allowed me to be part of his healing.

They also stressed how critical empathy is in improving the clinical encounter. In addition, the students wrote about re-evaluating their responsibilities as medical students.

3.2.7 | Retrospective feelings about the encounter

Despite generally reporting movement in a positive direction in both patients and themselves (see Figure 2 for changes patients and students from beginning to end of encounter); and despite noting lessons learned that focused on patient-centred medicine, empathy, and relationship, students recorded *more* feelings of self-judgement, frustration, and lack of self-efficacy *after* than *during* the encounter (see Table B1 for frequencies of student perceptions of their emotions during and after encounters).

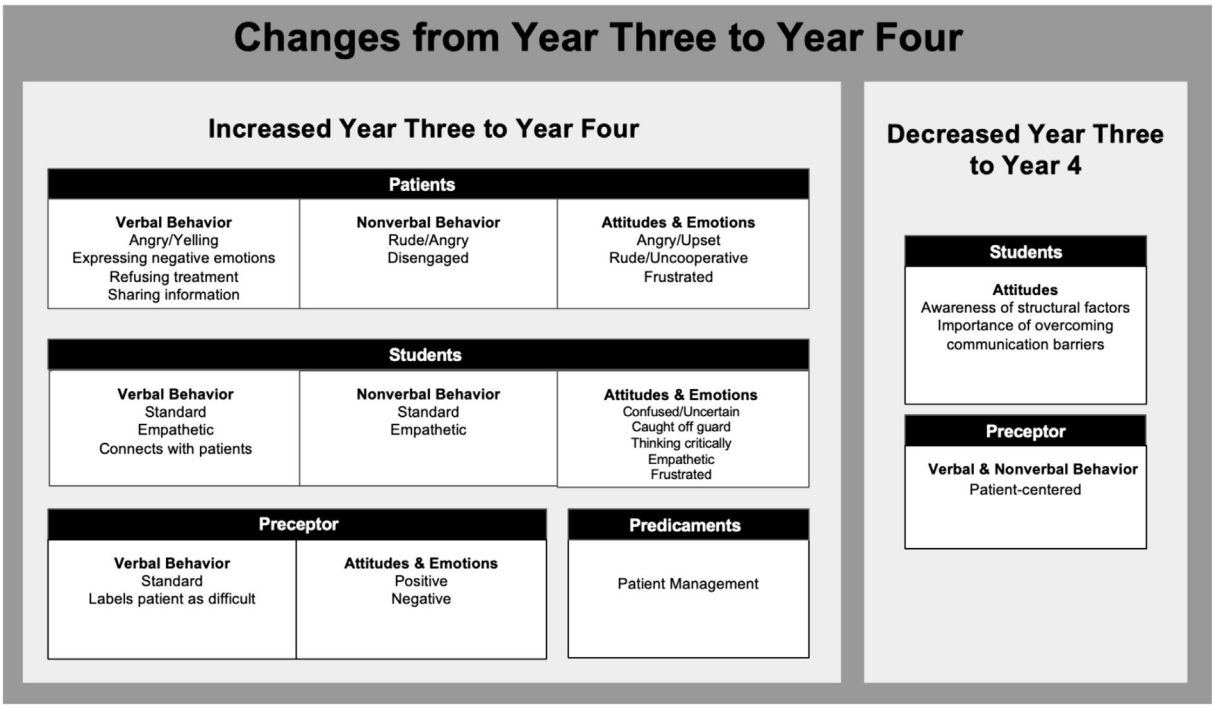

FIGURE 3 Changes in student perceptions of the clinical encounter from third to fourth year.

3.3 | Changes in students from years 3 to 4

Examining changes in students from Year 3 to Year 4 showed many positive developments, while confirming the overall patterns described above. Figure 3 summarises key changes in student perceptions of various characteristics of patient, student, and preceptor attitudes and behaviours organised into broader categories that increased or decreased from year three to year four.

3.3.1 | Student perceptions of predicaments

As fourth-year students, their ability to identify the nature of the predicament expanded to issues outside of the patient-student dyad, such as family involvement or differences of opinion with the preceptor.

3.3.2 | Student perceptions of preceptors

As shown in Figure 3, fourth-year students reported more positive *and* negative perceptions of preceptors compared to mostly positive views as third-year students. Fourth-year students appeared to have more interactions with preceptors, stating that preceptors gave them advice and expressed compassion and concern for them more often than as third-year students. But they also were more likely to record preceptors expressing negative views of patients. Student critiques of preceptors suggested more subtle, internalised judgements about what constitutes being a "good physician." (frequencies for student perceptions of preceptors from year three to year four are presented in Table B2).

3.3.3 | Student perceptions of patients' behaviour and attitudes

Fourth-year students were more observant of their patients' positive *and* negative behaviour and attitudes. For example, fourth-year students reported more patients who ultimately agreed to treatment, were appreciative and cooperative, shared personally, *and* more instances of angry, uncooperative, and rude patients as well as patients who were afraid and anxious. (Table B2 displays frequencies for student perceptions of patients' behaviours and attitudes by year).

3.3.4 | Student responses and feelings

In the section of Figure 3 that focuses on student behaviours and attitudes, we show that fourth-year students documented more examples of verbal and nonverbal empathy and patient-centeredness than as third-year students, and more examples of connecting with patients, respectful communication, de-escalating behaviour, and advocating for patients. Fourth-year students' behaviour was less determined by the type of patient encountered than third-year students. For example, third-year students tended to show more empathy to patients who were cooperative and pleasant, thus mirroring the patients' positive behaviour. The empathetic behaviour of fourth-year students was more evenly distributed among angry, anxious, and cooperative patients. During and after the encounter, fourth-year students reported more instances of empathic and compassionate feelings toward patients. By contrast, third-year students recorded more instances of difficulty empathising with patients, and more negative attitudes toward patients than as fourth-year students. Yet after the

encounter, fourth-year students also described feeling caught off guard, sad, helpless, scared, confused/uncertain, regretful, doubting their own efficacy, and engaging in self-judgement more than as third-year students (see Table B2 for frequencies of student perceptions of their reactions and emotions).

3.3.5 | Changes within the encounter

Comparing change within encounters from third to fourth year, fourth-year students showed more examples of positive movement in both patients and themselves, suggesting greater student effectiveness. Patients seen by fourth-year students were evaluated as becoming less confrontational, more trusting, and more accepting of treatment. Students in their fourth year generally became less judgmental and more empathic toward patients, experienced improved communication with patients, and learned more from the encounter.

3.3.6 | Lessons learned

When they reflected on these encounters, fourth-year students were more likely than third-year students to emphasise the importance of empathy, relationship-building, and critical thinking about their patient's problems. They also were more likely to mention the importance of professional responsibilities toward their patients.

4 | DISCUSSION

The goal of this study was to explore changes in medical student perceptions of difficult clinical encounters over time (from Year 3 to Year 4) and how such shifts could deepen our understanding of the process of PIF. As a result, we observed positive growth in students from Year 3 to Year 4, including increased empathy and patient-centeredness. Fourth-year students also documented more examples of connecting with patients, respectful communication, de-escalating behaviour, and advocating for patients than they did as third-year students. In response to patients perceived as angry, rude, and uncooperative, fourth-year students described themselves and their preceptors primarily as engaging in routine medical behaviours, followed by expressions of empathy. While students grew in professionalism and compassion from Year 3 to Year 4, they also noted unresolved distressing emotions post-encounter.

Our findings support existing literature that progression during clinical training moves from peripheral involvement to more clinical responsibility and greater ownership of patients.[13] Our analysis indicates that third-year students tended to be in Stage 2 of the PIF model[9,10] with its focus on external validation, mastery of technical skills, and limited perspective-taking. Fourth-year students were often in Stage 3 i.e., able to consider multiple perspectives, subordinate their own interests for others' good, and identify positive role-models. Sometimes, fourth-year students appeared in a transitional process to Stage 4 as evidenced by taking ownership of their professional obligations,[23] while critiquing them according to their internalised professional values. This agrees with previous studies that students generally enter medical school in Stage 2 or 3 and proceed to Stage 4 .[10,24] Further evidence of this professional growth was fourth-year students' enlarging recognition of clinical predicaments, confirming that students grow increasingly capable of handling demanding or ambiguous problems.[12] Evolving PIF was also found in fourth-year students' more critical relationships with preceptors, building on Hendelman and Byszewski's work,[25] in which students identified greater lapses of professionalism among preceptors during clerkships.

In addition, as shown in other PIF research, fourth-year students in this study showed increasing commitment to patient care.[20] Further, they seemed to forge more empathic relationships with patients, in line with Pohontsch et al.'s[7] conclusion that as students become more confident in their clinical skills, they experience a resurgence in empathy. Fourth-year medical students appeared more emotionally invested in patients which likely reinforced their more patient-centred, empathic attitudes and behaviours, and greater movement within the encounter toward less judgement, more empathy, improved communication, and more lessons learned. Their ability to convey empathy to different types of patients fairly consistently also indicated evolution from Pontasch's finding that students' empathic behaviour is associated with patients being likeable, cooperative, adherent, optimistic, patient, informed, and appreciative.[7]

It is not possible to know with certainty *why* this evolution in professionalism occurred in students from Year 3 to Year 4. However, our analysis of the essays suggests that these shifts were related to changes the students made in how they interacted with patients. These changes included focusing on the patient perspective and demonstrating empathy regardless of the type of patient they were seeing as well as incorporating positive behaviours from physician role-models. Over time it appeared that students became more thoughtful and reflective about who they were becoming as physicians and brought this elevated attention to their patient encounters.

As noted, fourth-year students described greater feelings of negative emotions post-encounter, such as sadness, helplessness, fear, regret, and self-judgement, than they did as third-year students. This finding is consistent with PIF processes as well. Cruess et al.[10] point out that the socialisation process of PIF can result in anxiety, fear, and stress as well as satisfaction and joy, while Sarraf-Yazdi et al.[13] note that the process of self-deconstruction involved in PIF can be disorienting and confusing. It is also true that an early study[26] showed students tolerating increased or the same levels of anxiety and confusion in their fourth year compared to their third year while increasing empathy, relationship focus, and connection with patients.

More recently, Lönn et al. frame persistent negative emotions as a key aspect of emotionally challenging situations (i.e., difficult clinical encounters) that prompt PIF in medical students.[27] They explain that as students endeavour to resolve their negative feelings through self-reflection, they become more adept at managing these feelings and develop a deeper awareness of self which are important elements of PIF. Lönn et al.'s findings help to explain how fourth-year students in

our study developed as professionals in multiple areas while also contending with lingering negative feelings.

We used high-quality data to examine variation in medical student perceptions of difficult clinical encounters over time. However, several aspects of the data and study limit our conclusions. First, while the goal of qualitative research is not generalisability, because the study was monocentric in the context of a single public medical school, this may have skewed the findings, though theoretical saturation was achieved. Second, the data could be impacted by self-enhancement bias[28] and other memory biases[29] since the data consisted of students' retrospective recollections of events. Potential memory biases were mitigated by recollections typically occurring within days or weeks of the actual events. Greater reporting accuracy is suggested by recollections of specific verbal and nonverbal actions in addition to general impressions. Future research should address these issues, as well as examining students' professional growth over time in managing difficult clinical encounters from the perspectives of patients and preceptors. Larger, quantitative studies can also make meaningful contributions about generalisability of results to students at other institutions.

Based on this research, medical educators can help students in their third and fourth years of medical school take "the next step" in their PIF in several ways. For example, especially during their third year, students could benefit from encouragement to move beyond purely behavioural responses and conformity to institutional norms toward more emotional self-awareness and more compassionate, patient-centred care. In both clinical years, but especially during students' fourth year, preceptors should realise that students pay close attention to their supervisors' verbal and nonverbal behaviour, and ensure that they are modelling appropriate patient interactions that adhere to the highest professional standards. Preceptors could also play an active role in normalising (while always keeping student safety and well-being in mind) that the many unresolved distressing feelings students experience are part of the PIF process. Further, they could provide reassurance and guidance to students by appropriately disclosing their own constructive coping strategies for regulating upsetting emotions. Our results also indicate that especially in Year 3, but also in Year 4, students have many questions and uncertainties about how to manage difficult clinical situations. Short debriefing sessions[30] after such contacts could focus on brainstorming ways to deal with specific problematic patient verbal and nonverbal behaviour as well as improvisational role-playing demonstrating empathic, patient-centred interactions. Finally, the findings of this study may be useful for medical education in other settings (i.e., 5 to 6-year undergraduate programs) by helping to facilitate the PIF of medical students in their clinical years.

5 | CONCLUSION

To our knowledge, this is the first study to document a clear expansion in patient-centred approaches among medical students from Year 3 to Year 4 in a 4-year medical program. The findings provide a detailed view of the perceptions of clinical medical students regarding the emotions and behaviours of their patients, their preceptors, and themselves during difficult clinical encounters, as well as what they learned from these encounters. The findings also provide important insights for clinical educators into how, through modelling and debriefing, they can guide students through the stages of their PIF.

CONFLICT OF INTEREST

The authors have no conflict of interest to disclose.

AUTHOR CONTRIBUTIONS

Nicholas Freeman: Writing—original draft; methodology; visualization; writing—review and editing; software; formal analysis; project administration; investigation; conceptualization; validation; supervision. **Johanna Shapiro:** Conceptualization; investigation; writing—original draft; methodology; validation; visualization; writing—review and editing; formal analysis; project administration; data curation; supervision; software. **Marvin Paguio:** Writing—original draft; methodology; validation; writing—review and editing; formal analysis; data curation; software; visualization. **Yasaman Lorkalantari:** Writing—original draft; methodology; validation; visualization; writing—review and editing; formal analysis; data curation; software. **Alexis Nguyen:** Writing—original draft; methodology; validation; visualization; writing—review and editing; formal analysis; software; data curation.

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DATA AVAILABILITY STATEMENT

Research data are not shared.

ETHICS STATEMENT

This research was reviewed and approved by our institutional review board (protocol HS #6657) and by our institution's FERPA (Family Educational Rights and Privacy Act) office, which reviews all student-related research to protect student privacy.

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APPENDIX A. EXAMPLES OF CODING CATEGORIES. A

Verbal Behaviour (71)*

Descriptions of the topic or emotions behind verbal statements made during the encounter by a preceptor, patient, or student

Preceptor[18]

20.2: Preceptor verbal action to patient—patient centred

23.2: Preceptor verbal action to student — labels patient as difficult.

Patient (34)

10.4: Patient's verbal action — appreciative/complimentary/polite

10.20: Patient's verbal action — refuses treatment

Student[19]

25.7: Student verbal action — standard response/question

25.1: Student verbal action — connects with patient

25.8: Student verbal action — uses interpreter

Non-verbal behaviour[18]

Description of the body language of the patient, preceptor, and student

Preceptor[3]

22.1: Preceptor non-verbal action to patient — positive

Patient.[8]

11.3: Patient's non-verbal action — happy/smiling

Student.[7]

26.1: Student non-verbal action — caught off guard/surprised/uncomfortable

Student perception [38].

The student's perception and judgement regarding the patient or the preceptor

Patient (32).

12.2: Student perception of patient — happy, kind, pleasant, polite

13.1: Student perception of patient — angry/upset

Preceptor[6]

24.4: Student perception of preceptor — dismissive

24.6: Student perception of preceptor — empathic/compassionate

Predicaments[12]

Problems with the patient encounters that students felt required attention

27.1: Student predicament — communication w/Pt

27.5: Student predicament — Pt management

27.8: Student predicament — how to break bad news

Student state of mind during the encounter (34)

The emotions, attitude, and mental state of the medical student before the patient encounter

30.13: Student state of mind — anxious/uncomfortable

30.15: Student state of mind — frustrated

30.25: Student state of mind — confused/uncertain

Student reflection after encounter — after the encounter[20]

The emotions, attitude, and mental state of the medical student before the patient encounter

31.1: Student reflection — happy/relieved

31.9: Student reflection — frustrated

Lessons learned[27]

Student reflections on lessons they learned regarding issues that affected their encounter as well as skills that are necessary for navigating difficult patient encounters

32.13: Student reflection — patient-centred medicine

32.14: Student reflection — empathy/important to understand patient's POV

Developmental arc[27]

The coder's subjective assessment of whether the essay evidenced movement from the patient or student, from one emotional point to another, and whether that movement had a positive or negative valence.

Patient[14]

33.7: Patient developmental arc — refusal of treatment to understanding/accepting treatment

Student[13]

35.3: Student developmental arc — more to less judgmental toward patient

35.4: Student developmental arc — no/little understanding to better understanding of patient

*Numbers in parentheses refer to the total number of codes in each category.

APPENDIX B. FREQUENCY TABLES FOR STUDENT PERCEPTIONS OF VARIOUS ASPECTS OF DIFFICULT CLINICAL ENCOUNTERS B

TABLE B1 Frequencies for student perceptions of their attitudes during and after the clinical encounter ($N = 69$).

	Clinical encounter *N*	Post-encounter *N*
Self-judgement	3 (4.34%)	29 (42.0%)
Frustrated	19 (27.5%)	36 (52.1%)
Doubt self-efficacy	9 (13.0%)	21 (30.4%)

Frequencies are presented. Percentages of total sample are in parentheses.

TABLE B2 Frequencies for student perceptions of attitudes and behaviours during difficult clinical encounters by year ($N = 69$)

	Year 3 *N*	Year 4 *N*
Predicaments		
Patient management	21 (30.4%)	31 (44.9%)
Patient verbal behaviour		
Angry/yelling	7 (10.1%)	38 (55.0%)
Expressing negative emotions	6 (8.69%)	33 (47.8%)
Refusing treatment	14 (20.2%)	22 (31.8%)
Sharing information	10 (14.4%)	23 (33.3%)
Patient nonverbal behaviour		
Rude/angry	4 (5.79%)	14 (20.2%)
Disengaged	2 (2.89%)	13 (18.8%)
Patient attitudes and emotions		
Angry/upset	17 (24.6%)	34 (49.2%)
Rude/uncooperative	5 (7.24%)	26 (37.6%)
Frustrated	15 (21.7%)	17 (24.6%)
Student verbal behaviour		
Standard	35 (50.7%)	61 (88.4%)
Empathetic	6 (8.69%)	30 (43.4%)
Connects with patients	5 (7.24%)	23 (33.3%)
Student nonverbal behaviour		
Standard	8 (11.5%)	22 (31.8%)
Empathetic	3 (4.34%)	33 (47.8%)
Student attitudes and emotions		
Confused/uncertain	5 (7.24%)	13 (18.8%)
Caught off guard	9 (13.0%)	25 (36.2%)
Thinking critically	11 (15.9%)	22 (31.8%)
Empathetic	5 (7.24%)	25 (34.7%)
Frustrated	12 (17.3%)	24 (34.7%)
Awareness of structural factors	12 (17.3%)	4 (5.79%)
Importance of overcoming communication barriers	15 (21.7%)	1 (1.44%)
Preceptor verbal behaviour		
Standard	21 (30.4%)	23 (33.3%)
Labels patient as difficult	2 (2.89%)	14 (20.2%)
Patient-centred	14 (20.2%)	7 (10.1%)
Preceptor attitudes and emotions		
Positive	18 (26.0%)	19 (27.5%)
Negative	5 (7.24%)	20 (28.9%)

Frequencies are presented. Percentages of total sample are in parentheses.