Advances in Health Sciences Education (2022) 27:201–213
https://doi.org/10.1007/s10459-021-10081-8

Contributing to the hidden curriculum: exploring the role of residents and newly graduated physicians

Kimberley A. MacNeil[1] · **Glenn Regehr**[2] · **Cheryl L. Holmes**[3]

Received: 31 August 2020 / Accepted: 31 October 2021 / Published online: 25 November 2021

Abstract
The hidden curriculum has been investigated as a powerful force on medical student learning and ongoing physician professional development. Previous studies have largely focused on medical students' experiences as 'receivers' of the hidden curriculum. This study examined how residents and newly graduated physicians conceived of their roles as active participants in the hidden curriculum. An interpretative phenomenological study was employed using individual, semi-structured interviews with residents and newly graduated physicians (n = 5) to examine their roles in perpetuating the hidden curriculum. A thematic analysis was conducted using a reflexive approach. Findings include insight into how residents and newly graduated physicians: (a) navigate the hidden curriculum for their own professional development; (b) intervene in others' enactment of the hidden curriculum; and (c) seek to repair the hidden curriculum for the next generation through their teaching. In light of our findings, we argue that: (a) more research is needed to understand how early career physicians navigate their engagement with the hidden curriculum; (b) students and educators be supported to consider how their agency to impact the hidden curriculum is influenced by the sociocultural context; and (c) residents and early career physicians are poised to powerfully impact the hidden curriculum through the learning environments they create.

Keywords Agency · Early career educators · Hidden curriculum · Transitions · Learning environment · Professional identity formation

✉ Kimberley A. MacNeil
Kimberley.macneil@alumni.ubc.ca

[1] Department of Educational and Counselling Psychology, and Special Education, Faculty of Education, University of British Columbia, Vancouver, Canada

[2] Centre for Health Education Scholarship & Department of Surgery, Faculty of Medicine, University of British Columbia, Vancouver, Canada

[3] Department of Medicine, Division of Critical Care, Faculty of Medicine, University of British Columbia, Vancouver, Canada

Introduction

The hidden curriculum, comprised of those aspects of day-to-day work that are not formally taught but are nevertheless perceived by students as integral to achieving success, has been implicated as a powerful locus for learning about professionalism in clinical learning environments. Through social mechanisms, students are enculturated into the norms and values inherent in the organizational contexts that house medical education (O'Donnell, 2015). Concerns abound that, as part of the hidden curriculum, medical students observe actions from 'role models' that directly contradict what is taught in professionalism curricula (Gofton & Regehr, 2006; Joynt et al., 2018). The dissonance individuals feel between the physician they hoped to be and the physician they feel pressured to embody, (Silveira et al., 2019) and the resulting sense of "losing who they 'really are'" (O'Donnell, 2015, p. 10) can result in cynicism and loss of empathy (Alimoglu et al., 2019; Billings et al., 2011; Peng et al., 2018).

Problematically, the ongoing stability of the culture that perpetuates the hidden curriculum suggests that those medical students who previously experienced "shock and awe" as passive observers (Holmes et al., 2017) engage in unprofessional acts themselves only a short time later as residents and later as faculty (Billings et al., 2011). Indeed, research documenting learners' trajectories indicate that transition periods (e.g., pre-clerkship to clerkship; clerkship to residency) may be times in which cynicism escalates (Peng et al., 2018). On the other hand, pivotal transitions have been proposed as an opportunity for individuals to see new contexts with 'fresh eyes' presenting opportunities for noticing and disrupting existing social structures (O'Donnell, 2015). Yet, to date, research on the hidden curriculum has tended to focus on medical students' observations and experiences, largely ignoring the experiences and perceptions of residents and recently graduated physicians as active participants in the hidden curriculum. If efforts to break the multigenerational cycle of the hidden curriculum are to be successful, it may be valuable to build a better understanding about how those who experience the hidden curriculum as medical students go on to navigate it *in situ* as they transition into their roles as residents and independent practitioners. Thus, research is needed to investigate how residents and newly graduated physicians understand the shifting sociocultural affordances and constraints of their new and evolving roles, and how these affordances and constraints influence the relationship between *knowing* about the hidden curriculum and *acting* responsively to obstruct its problematic aspects (Kahlke et al., 2020).

Methods

In this study we examined how residents and recently graduated physicians experienced their roles in the hidden curriculum. To achieve this, we took up an interpretative phenomenological approach given its suitability for understanding "phenomena of interest from a first person perspective" (Eatough & Smith, 2017 p. 193) and its ability to illuminate "experiences as they are lived by an embodied socio-historical situated person" (Eatough & Smith, 2017 p. 194). By working from an interpretative phenomenological approach, our goal was to build understanding about the "meaning participants ascribe to [a] phenomenon" (Teherani et al., 2015, p. 670), in our case the phenomenon of the

hidden curriculum, through our interpretation of "*what* was experienced and *how* it was experienced" by participants (Neubauer et al., 2019, p. 91).

Context

We conducted this research as part of our longitudinal exploration of a program called GRAPHiC (Guided Reflection And Professionalisation/Hidden Curriculum) in which medical students were primed to recognize the hidden curriculum and reflect on their experiences of it during their initial clerkship year (Holmes et al., 2017, 2018; Jarvis-Selinger et al., 2019) Originally piloted in the 2015–2016 academic year, the ultimate goal of GRAPHiC was to help students unhide the hidden curriculum through a process of guided individual and group reflections, thereby giving them agency in their own enculturation process. Specifically, GRAPHiC supported students to move through four iterative steps: priming; noticing; processing; and choosing (Holmes et al., 2015). This follow-up study was an extension of the original review of the program, which was approved by the university's Behavioural Ethics Review Board.

The study was conducted in a Canadian context currently under a state of reform, driven by concerns about the quality of the learning environment in both undergraduate and graduate medical programs. More specifically, post-graduate accreditation standards in Canada now include reference to the hidden curriculum's (positive or negative) influence on the learning environment (CanRAC, 2020), formally defining the hidden curriculum as "A set of influences that function at the level of organizational structure and culture, affecting the nature of learning, professional interactions, and clinical practice" (Association of Faculties of Medicine of Canada, 2010 as cited in CanRAC 2020). In the current study we focused attention on participants' experiences of the cultural manifestations of the hidden curriculum.

Participants

In the summer of 2019, we invited all former GRAPHiC participants (n = 12) to participate in the study via email. All participants had given written consent for follow-up interviews at the time of the GRAPHiC course. Five former GRAPHiC participants volunteered to take part in this follow-up study. At the time of follow-up interviews, two participants were residents in specialty programs and three were newly graduated family physicians. Our purposive sampling procedure of participants who had been immersed, through GRAPHiC, in discussing and reflecting on their experiences of the hidden curriculum meant they were well-positioned to contribute rich perspectives to our data set. Because of their previously gained knowledge and experience in thinking about issues pertaining to the hidden curriculum, participants in this study represented a highly specific sample positioned to contribute "strong dialogue", thereby bolstering our study's "information power" (Malterud et al., 2015). Further, the small sample size of our study was particularly well suited to an interpretative phenomenological approach given our emphasis on "detailed fine-grained analyses of individual lived experiences" (Eatough & Smith, 2017, p. 205).

Data collection

To understand participants' perceptions of the hidden curriculum in their current contexts, we conducted semi-structured, individual interviews. Interviews were conducted,

transcribed, and de-identified by the first author (KM) with whom participants had no previous relationship in order to foster opportunities for participants to express their perceptions freely.

Because of participants' involvement in a previous learner-centered initiative specifically aimed at helping them reflect on their own immersion in the cultural aspects of the hidden curriculum, our study focused on understanding their subsequent experiences of, responses to, and contributions to the cultural manifestations of the hidden curriculum. Therefore interviews were designed to explore participants': (a) perceptions of how GRAPHiC impacted their ongoing learning/development/practice; (b) understanding of themselves in light of the hidden curriculum and/or their contributions to the hidden curriculum; (c) experiences of resisting pressures of professionally problematic behaviours and/or addressing the professionally problematic behaviours of others; (d) feelings of being able to be their ideal physician self they had imagined previously; and (e) discussions with others related to the hidden curriculum. After conducting interviews with three participants, de-identified transcripts were shared with the full research team in order to ensure the questions, as asked, were effective in meeting the study goals. After review, the research team revised the original interview protocol to include follow-up probes to specific questions while still retaining all original questions. Following that, the three original interviewees participated in a second, follow-up interview. At that time, the remaining two interviews were conducted with the fully revised interview protocol. In sum, our data set was comprised of eight interview sessions total with three participants being interviewed twice and two participants being interviewed once. Each participant was interviewed for approximately 40–60 min total. To maintain confidentiality, we use pseudo-initials to identify our 5 participants (P1, P2, P3, P4, P5) and indicate their role as resident (R) or newly graduated physician (NGP).

Data analysis

Working from an interpretative phenomenological approach required that the research team mine data with persistent attention to participants' experiences "always beginning with the particular and ensuring that any generalizations are grounded in this" (Eatough & Smith, 2017, p. 197). Consistent with the recommendations of Bynum & Varpio (2017) our analytic process was characterized by moving back and forth between our analysis of data (i.e., the parts) and constructing emerging understandings of the phenomena (i.e., the whole). To engage in this part-to-whole analysis, we employed robust mechanisms for coding and organization in line with thematic analysis. For example, to immerse ourselves in the data, two members of the research team read transcripts from all interviews, 'noticing' our thinking in relation to our research questions, which we captured in "casual notes" (Braun et al., 2019, p. 852). Next, we audibly shared our notes with the full team to collectively generate tentative codes to guide our re-engagement with participants' experiences. To test our interpretations against the data, one team member inductively coded data staying close to the language used by participants (i.e., semantic coding) while bringing emerging patterns to the full team from which we created, revised and defined themes (Braun et al., 2019). Our analysis process was inductive (i.e., grounded in participants' experiences) but our interpretative lenses were necessarily in play and informed by related theory, research and experiences. Our back-and-forth testing of data against our interpretations enabled our efforts to examine the details of "particulars…before moving to look for patterning of convergence and divergence across" participants' experiences (Eatough & Smith, 2017, p.

193). Finally, themes were gathered in visual displays with illustrative quotes to support us as we moved to representing both the uniqueness and shared aspects of participants' experiences (Eatough & Smith, 2017).

Reflexivity

The research team intentionally represented a range of disciplines related to researching the hidden curriculum. Through our interpretative phenomenological approach, we acknowledged and leveraged our diversity of experiences as we engaged in interpreting data. At the time of the initial GRAPHiC pilot, CH was a clinical faculty member of the undergraduate medical program, as well as the developer and faculty lead of the program. She is now the Associate Dean of the MD undergraduate program and has an ongoing interest in, and responsibility for, the hidden curriculum and the learning environment. GR is a PhD trained researcher with a specialization in cognitive science who has been engaged in health professions education scholarship for over 25 years. KM is a PhD candidate, educator, and educational researcher who brought expertise in learning. Note that all members of the current research team had engaged in research activities in earlier GRAPHiC studies.

Results

Participants referenced the ways in which they were contributing to the hidden curriculum, including how they were navigating it in relation to their own personal and professional development. They further described their sense of agency to address the problematic aspects of the hidden curriculum as dynamic and constrained by sociocultural factors and outlined the ways in which teaching provided them with opportunities for a more active role in addressing it. We summarize our findings in 3 themes as elaborated below: (1) Mindfully navigating their own professional development; (2) Intervening in others' enactment of the hidden curriculum; and (3) Repairing the hidden curriculum for the 'next generation'.

Mindfully navigating their own professionalism development

Notably, when asked about their own role in perpetuating the hidden curriculum, participants did not provide specific examples related to negative instances of their own professional behaviour. Only one participant (P5/R) described how long workdays and little sleep can "put a damper on the compassion meter" and that resident discussions at the end of the day can turn towards a type of patient blame. However, these comments were generalized to residents broadly and P5/R did not offer a specific example of their unique contributions in this regard. Participants did however emphasize processes that helped them consciously think through and examine problematic issues of practice they were grappling with. For example, P5/R described how to respond if an issue was a "self-problem [vs. interpersonal/collegial/clinical knowledge-based], where you know, you went into a patient interaction and something didn't go right":

> I think it's just important to…reflect on why that happened…where the patient was coming from, where you were coming from. What your state of mind was and that you definitely notice a change whether you're coming on call at 5pm or you're at

> 6:30am after a full night of not sleeping. Just to remember that you've got to provide compassionate care at all hours, and it can be difficult.

Another participant (P1/NGP) referenced the way they wrestled with billing practices, suggesting that, "there's a process in there and thinking about 'What are the ethics and the implications of this?'" Participants also described how discussions with peers were part of their reflective processes when confronting aspects of their work they found challenging or problematic. For example, P4/NGP stated:

> I think that it is very important to have those conversations with your peers and yeah that that be a part of the dialogue that follows you through your training is having periods to assess your behaviour and who you are in comparison to who you wanted to be or who you saw yourself in medicine.

In addition to these processes of individual and collective reflection, newly graduated physicians described agentive choices they had been able to make about their work environments and colleagues that would allow them to be the physician they hoped to be. P1/NGP, for example, described how working in their own practice provided a degree of independence that allowed them to "practice in the way you want to…to do what you think is appropriate." P3/NGP indicated that they "chose a clinic that I thought had my same kind of ideals and principles [and had] broken away from the constraints. Like, I don't have hospital privileges, so I've kind of created an environment of my own that I think will be supportive and will allow me to be the physician that I want to be." P4/NGP similarly recalled discussions with peers in which they were "reflecting on particularly environments we want to work in. And namely those where [physicians] are making an effort to be kind to their patients and are conscious to [be empathic] and so on."

Intervening in others' enactment of the hidden curriculum

All participants described feeling constrained in their ability to address the negative actions of others, with the dominant constraint articulated being power hierarchies. Perhaps unsurprisingly, this was very salient for the residents. For example, P5 described knowing there are "ways to deal with" others' inappropriate behaviours/comments, but:

> …it's still quite difficult because…you're going to be working with this person in the future, you don't want them to limit your operative experience or think that you're a poor resident or that you're ratting them out or that you're going to go to the college or something like that.

The newly graduated physicians were more nuanced in their discussion of this issue, describing the hierarchy as dynamically changing over time and influenced by specific contexts. First, this dynamism was reflected in how the newly graduated physicians contrasted their current position in the chain of hierarchy as distinct from their time as a medical student, worrying about getting "a good letter so that I can match for my spot," (P3/NGP) and even as a resident, being worried about "Well, are people going to like me so that when I open a practice they'll refer to me so that I have…a business?" (P3/NGP). What we heard from participants who experienced these changes was just how swiftly they could occur. For example, P1/NGP described colleagues viewing new graduates "as peers even though they may have been our preceptors just a year ago. At least that power differential is less apparent if at all." In the intervening time between their two interviews, P3/NGP felt they had "changed so much…you really still struggle a bit in the first couple of months coming

out of the residency gate to figure out 'Oh, actually my voice has value'…Or, I'm allowed to speak is almost maybe a better way to put it." Interestingly, however, when thinking about confronting colleagues about potentially inappropriate behaviours, the hierarchy reasserted itself as a key reason for staying silent. For example, P4/NGP noted that they had "just finished residency":

> I can't think of examples where I've really specifically called a senior staff member out for their behaviour…there's just a lot of hierarchy in medicine and so I'm not sure how well received that would be. But I think that the ways in which I guess I advocate for patients is just by not participating in the kind of disparaging dialogues that often happen.

Repairing the hidden curriculum for the 'next generation'

Participants described their most significant contributions to redressing the negative aspects of the hidden curriculum as embedded in their engagement with learners. Residents in particular highlighted just how frequently they interacted with medical students, which they felt placed them in a position to influence leaners' experiences of the hidden curriculum. One resident (P5/R) noted that "we as residents certainly have a large contribution to the hidden curriculum because we're directly involved with medical students daily and they spend the most amount of time with us compared to staff members." However, the newly graduated physicians were also aware of their role in the hidden curriculum when engaging with students. P3/NGP, for example, felt it was important to help students they worked with "be a human being" because "there were definitely rotations where I just felt like I was a paper machine…and all I did was whatever [my preceptors] wanted me to."

One mechanism by which participants tried to accomplish this was in their efforts to redress the negative experiences they had with role models they had when they were students. They described being intentional about approaching their practice professionally knowing learners were observing them. For example, P2/R was aware of "setting the standard of care" while working with medical students:

> …and so I try and be quite aware of being a good role model… be aware of how my practice and kind of my frame of mind is when I'm working in a patient setting and with other learners around…because I want to be someone that they look up to and have a positive experience …because I still remember being in their position quite well and looking up to some of the residents that I was working with in their stage.

However, participants also talked about adopting a teaching approach that created a positive learning environment for the learners themselves. For example, P4/NGP described teaching as an opportunity to consciously resist problematic aspects of the hidden curriculum by making "an effort to avoid the classic disparaging remarks…that were not uncommon in my own educational journey." This participant went on to describe how they and another graduate of the GRAPHiC program "talk often about the kind of environment we want to create for learners." They described fostering a form of empowerment by creating safe spaces for medical students to focus on their learning. One of the residents (P2/R) described this as trying to:

> give them space to ask questions and feel like they're involved and that they have an important role as well. Because…I think that medical students and residents of all

> stages have really important roles to play and I remember not always feeling that way as a really young medical student.

One of the newly graduated physicians (P1/NGP), also described fostering empowerment by urging medical students to resist taking on a passive role in their learning process. When working with learners they tried to:

> bring it back to [the student] and I tell them to take what is meaningful for them and tell them 'Hey, this is just one way of doing something, so whatever I say today is going to be, someone else is going to say I'm completely wrong'…and the most important part is that they're learning…hopefully I'm removing that power differential.

Interestingly, although all participants revealed (to us) the effortful process they exerted in creating learning opportunities and to positively impact the learning and practice of 'the next generation' of physicians, they did not discuss these efforts explicitly with their learners. For example, P1/NGP described how they were trying to change the learning experience (and future teaching styles) of the medical students with whom they worked via role modelling, but seemed to simply hope that the student would pick it up:

> I think that just by showing through example to them that that's my way of teaching… *hopefully* they will be able to incorporate this style into their teaching so it's less—so that it reduces that power differential.

Similarly, P3/NGP described intentionally demonstrating a self-reflective strategy they had generated during GRAPHiC that she was trying to impart to two third-year clinical clerks:

> And I just kind of demonstrate that's what I do for self-care, for a self check-in to see 'How are things going?' I think they were appreciative of that and like 'Okay, here's something she's doing.'

However, when asked whether they discussed these ideas with the students explicitly, the response was negative:

> Umm, did I tell them everything I was thinking? No, because sometimes you have those private thoughts, but I think it was just like demonstrating a way that you can still be present in the moment and also reflecting on your day.

When asked whether they explicitly discussed with learners the process by which they resisted the problematic aspects of the hidden curriculum, P4/NGP recognized that it might be a valuable thing to do, but admitted that they had not thought to do so:

> Explicitly [sharing] the effortful process [with students] that goes into avoiding the kind of cliched behaviour that we see elsewhere… I think that that's a really good conversation that should take place. But it's not one I've had.

Thus, while participants were intentional about how they interacted with students and how they practiced in front of them, they were not explicit about their process of exactly what they were doing why they were approaching their teaching in these ways.

Discussion

In the present study, we saw how residents and newly graduated physicians navigated the hidden curriculum in the context of their new roles. Our approach and findings present a significant contribution to a body of literature which has predominantly examined the perceptions of medical students as recipients of the hidden curriculum (Lawrence et al., 2018). By asking participants about their *contributions* to the hidden curriculum, this study has the potential to better illuminate the "complicated parts" of a "complex social [entity]" (O'Donnell, 2015, p. 14). Our findings indicate that participants perceived themselves to be: (1) mindfully navigating the influence of the hidden curriculum on their own professional development; (2) still constrained in addressing the professionalism of colleagues although their sense of agency was building up and changing over time and in response to different contexts; and (3) trying to influence the hidden curriculum by focusing their attention on their role modelling for and teaching of the next generation of medical students.

Our findings resonate with our previous studies that explored the experiences and practices of these same participants during their medical school training. For example, we found in earlier studies of GRAPHiC that while students became very reflective about the hidden curriculum that they experienced, they did not communicate their own roles as active participants in unprofessional acts (Holmes et al., 2018). Further, while they aspired to be like their positive role models, they worried there was an inevitability to becoming insensitive and had difficulty developing strategies to bolster themselves against a professional development trajectory they perceived as undesirable (Holmes et al., 2018; Jarvis-Selinger et al., 2019). What we see in these later discussions with the same participants is that they continued to have an ongoing awareness of, and language for describing, the hidden curriculum, and they continued to engage in self-reflective and discussion-based processes regarding the hidden curriculum as they moved forward in their careers. Despite this, participants still did not identify themselves as contributing to the negative aspects of the hidden curriculum through specific examples of unprofessional behaviour. Even though our interview questions were, in part, structured to understand how participants were engaging with/in problematic aspects of the hidden curriculum they tended to focus on systemic challenges to their professionalism rather than problematic instances. It is possible that participants were so grounded in the complexity of practice that they may have found it difficult to reduce the hidden curriculum to observable acts given their window into the decision making behind their practice. With this in mind, future research is needed to understand how individuals conceive of their own moment-by-moment influence on the hidden curriculum as experienced by medical students.

Also resonant of our explorations with these participants as medical students, agency to act as they saw appropriate continued to be an issue. For example, when they observed instances of unprofessional behaviour in others, they tended to invoke hierarchy as a recurring constraint that made speaking up to colleagues and/or superiors difficult (Gaufberg, 2010; Holmes et al., 2017). Not surprisingly it was residents who felt the agentic constraint most strongly, with newly graduated physicians describing themselves to be better positioned to make choices consonant with their values. Interestingly, in describing this agency, they often focused on their choice of work location, emphasizing their ability to select (or create their own) work environments that were consistent with their values and approaches to practice. Thus, consistent with the idea that agency occupies a "sensitive space between an individual's hopes and plans, and their realized or realizable potential" (Pappa et al., 2019, p. 594) our participants appeared to

be implicitly acknowledging the power of sociocultural factors for shaping their enacted roles. In this sense, our findings echo the notion that the hidden curricular space lives within organizational contexts and cultural subtexts (O'Donnell, 2015) and that locating responsibility for the hidden curriculum within the individual incompletely addresses issues that exist at the level of organizational culture (Hodges & Kuper, 2015). In contrast with characterizations of medical students who are passive recipients of the hidden curriculum (Bandini et al., 2017) this work shows that, only a short time later, individuals focused on their opportunities to exercise agency in relation to both the hidden curriculum and, necessarily, the sociocultural milieu. These findings suggest that it might be helpful to support individuals to consider how their agency for addressing the hidden curriculum is grounded in social contexts (Bandura, 2000, 2006) as they prepare to move forward in their careers. Likewise, it also suggests a need for medical educators to interrogate, perhaps alongside learners, how the environment and their contributions to it are influencing learning and development.

Where individuals felt they had the greatest influence on the hidden curriculum was through their teaching, effortfully impacting the learning environment by redressing aspects of the hidden curriculum that they felt had negatively impacted their own learning. Rather than 'resist' for their own professional development they were more concerned about students' trajectories and seemed to see their actions as akin to the "lecture hall" of the hidden curriculum (Michalec & Hafferty, 2013). Our findings both contrast and complement research in which residents take a more passive approach to teaching, expecting it to 'just happen' through modelling and observation (Sternszus, 2016). Rather, our participants were keenly aware of their importance to medical student learning (Karani et al., 2014; Sternszus et al., 2012) and took an active role in creating positive learning opportunities. However, while they were intentional about demonstrating positive ways of being a physician and approaching their teaching in a way that can be described as student-centered, they were doing so while withholding details about the 'why' of their approach to teaching and practice. In other words, the effortful process of repairing the hidden curriculum for learners remained hidden from them without revealing, for example, one's thinking about ethical issues (Gofton & Regehr, 2006). Cognitive apprenticeship theory may be useful to consider how to make "expert thinking 'visible' to students" while "fostering the cognitive and meta-cognitive processes required for expertise" (Lyons et al., 2017, p. 723). Revealing one's thinking may go a long way to help students and educators together navigate tensions between personal and professional values while working within the realities of a particular context. Doing so would show how the agentive experience is a complex process rooted in "past influences and experiences, engagement with the present, and orientations towards the future" (Ecclestone, 2007, p. 125). However, our finding that participants were actively yet implicitly aiming to influence the hidden curriculum, without explicitly revealing their thinking to students about the influence of the existing culture at play and their own experiences as a learner/professional may have been effective in other ways. Notably, it is believed that the hidden ways of learning embedded in day-to-day activities can be more powerful than formalized initiatives (Hafferty, 1998; Witman, 2014). By altering the learning experiences of students in a way that aligned with the realities of authentic practice, participants were 'working within the system' to leverage the power of daily, implicit learning in line with recent calls to harness the power of the hidden curriculum for positive change Holmes et al., 2015; Ghosh & Kumar, 2019; Lawrence, 2018; Mackin et al., 2019; Neve & Collet, 2018).

Limitations

Our goal for this paper was not to make claims about the longitudinal efficacy of the GRAPHiC course. Nonetheless we do note that by conducting this work in the context of our exploration of the program, several limitations arose. First, our participant pool was limited to those who participated in the original program and available on follow up. The resulting sample of five participants is small and we can make no claims to having fully explored the dimensions of this phenomenon. Further, while we cannot make any claims regarding the role of the initial program in our participants' ability to reflect on the hidden curriculum or on their role in disrupting its iterative nature, we also cannot be sure that the reflections from our participants are typical of other residents or newly graduated physicians. This was likely a valuable group to explore at this point given the relative lack of work in the area and the likelihood that our former GRAPHiC students might be better positioned to reflect on these issues. Nonetheless, additional work is likely necessary to affirm and extend our findings with other groups of recent medical graduates. Finally, we note that our own focus on the original GRAPHiC course content resulted in an emphasis in this study on the cultural dimensions of the hidden curriculum with little attention paid to participants experience of, or sense of agency in addressing, the more structural dimensions of the hidden curriculum, and therefore we cannot speak to their perceptions of this important aspect of the hidden curriculum.

Conclusions and implications

The findings of this study highlight the potential value of studying residents and newly graduated physicians regarding their role in the hidden curriculum and to point to some areas of concentration for future study. To build on our findings, future research on the decision making related to one's influence on the hidden curriculum has the potential to illuminate the inner workings of it as a learning mechanism as well as its self-perpetuating nature. Second, efforts to improve the educational impact of the hidden curriculum have centered on the notion that as individuals (e.g., students, faculty) become more aware of its influence they will adjust their thinking and practice responsively. Our work suggests a need to complicate this idea by helping individuals consider how their agency to respond to and influence the hidden curriculum interacts with their work context. Relatedly, our focus on participants' experiences of the culture of the hidden curriculum beg for complementary research examining the influence and interaction of the structural mechanisms at play. Finally, participants' beliefs that their engagement with learners can repair negative aspects of the hidden curriculum suggests a need to further research the impact of how educators who are actively aiming to influence learning through the hidden curriculum do so as they engage with learners.

Acknowledgements This project was supported through a University of British Columbia Faculty of Medicine Postgraduate Medical Education grant. We would like to thank the participants in this study for their willingness to share their experiences with the project team.

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