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Informed self-assessment during the transition to medical school: a longitudinal narrative study

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ABSTRACT

Objectives To explore how medical students' narratives of informed self-assessment (ISA) change during their first 18 months of study.

Design This longitudinal study used student narratives drawn from qualitative interviews and written reflections during the transition to medical school, to examine changes in ISA. Our analysis was informed by Situated Cognition Theory which recognises the impact and interplay of personal and environmental factors in cognition.

Setting To study medicine, first year students need to adapt their self-regulated learning in the context of a new peer group, study demands and educational culture. During this adaptation, students need to seek and interpret available cues to inform their self-assessment.

Participants Longitudinal data were collected at five time points over 18 months from a diverse sample of seven first year medical students in an undergraduate medical programme, including 13.5 hours of interviews and 12 written reflections.

Results Before and after starting medical school, the participants' self-assessments were informed by environmental influences (exam results and comparison with peers), and personal influences (fear of failure and anxiety about not belonging). Early uncertainty meant self-assessments were overestimated and underestimated. By the end of first year, an enhanced sense of belonging coincided with less fear of failure, less emphasis on exam performance and reduced competition with peers. Self-assessments became increasingly informed by evidence of clinical skills and knowledge gained related to future professional competence.

Conclusion Influences on medical students' ISAs change during the transition to studying medicine. A greater sense of belonging, and evidence of progress towards clinical competence became more important to self-assessment than comparison with peers and exam performance. Our findings reinforce the importance of formative assessments, opportunities to study and socialise with peers and early clinical experiences during first year. These experiences enhance ISA skills during the transition to medical school.

STRENGTHS AND LIMITATIONS OF THIS STUDY

⇒ Narrative analysis is well-suited to exploring the subjective and contextual nature of informed self-assessment.
⇒ Findings were drawn from participants with diverse backgrounds, different data sources and sampling times to increase the trustworthiness of our findings.
⇒ Our findings on the changes in personal and environmental influences on informed self-assessment were informed by Situated Cognition Theory.
⇒ Participant retention limited the final data collection point.
⇒ Our sample was drawn from a single medical school and cohort; findings should be tested in other contexts and medical schools.

INTRODUCTION

The personal evaluation of progress or achievement and the ability to identify areas of strengths and strategies for improvement is critical to the self-regulation of learning in medical study and practice.[1–3] For this reason, self-assessment is an important graduate outcome of modern medical curricula.[4 5] This reflective process is shaped by the student's learning experience, the environment and relationships, tempered by personal responses related to emotions and confidence and perceptions of past experiences.[6] Self-assessment is contextual and subjective, so students are instructed and coached to self-assess by seeking, monitoring, reflecting on and synthesising available evidence.[6–8] The integration of available evidence to evaluate progress or achievement is known as *informed self-assessment* (ISA).[4]

Self-assessments do not correlate well with measured performance and knowledge.[9 10] Patterns however are recognised. For example, high performing medical students are more likely to under-rate their performance, whereas the lowest performing students tend to over-rate their performance.[11] Transitions, such as at the beginning of medical school, disrupt self-assessment.[12] This is not surprising as medical school entrants need to make sense of a new set of experiences, in the context of a new peer group, study demands and academic culture.[13 14] Over

time, correlations between self-assessment and measured performance improve.[15] The focus in self-assessment research has shifted away from studies of accuracy. This is because self-assessment accuracy of a skill does not correlate with improved performance in that skill.[16] Instead, attention has moved to understanding the process of ISA as a strategy for learning, and how this can be supported. Changing patterns in self-assessment describe, but do not explain how and why medical students learn to balance, synthesise and reconcile available data to inform self-assessment.[1 10 17 18]

Sargeant *et al*'s[6] conceptual model of ISA in senior medical students and junior graduates in clinical settings describes ISA as a balancing act of 'competing internal and external data'. Even with experience, medical students report how the tensions between personal, intrapersonal and environmental influences limit their access and interpretation of available evidence for ISA. For example, in seeking feedback about clinical performance for ISA, there is a tension between understanding the value of feedback, fearing and accepting feedback.[19] During the transition into a medical programme, students also need to reconcile external information with personal responses in order to self-assess. However, early in their programme students face different learning challenges to their senior peers. These early challenges include learning novel concepts and myriad details in the basic sciences. In later years, students self-assess their patient care skills through practice and supervisor feedback.

Understanding how medical students learn to seek and interpret information to inform their self-assessment early in their course will assist medical educators to guide student' self-assessment as a learning strategy, through curricular design that provides fit-for-purpose information and experience.

This longitudinal study explores how environmental and personal influences on ISA change and interact during the transition to medicine.

Our research questions were:

1. What are the personal and environmental influences on student ISA during the transition to medical school?
2. How do these influences change during the transition to medical school?

METHODS

Study design

This longitudinal, qualitative study analysed medical student narratives about self-assessment drawn from qualitative interviews and written reflections collected over the first 18 months of an undergraduate medical programme. We follow Standards for Reporting Qualitative Research for reporting qualitative research.[20]

NARRATIVE ANALYSIS

A narrative methodology was chosen so we could understand the influences of self-assessments for our participants in different contexts and over time.[21] Narratives are defined as personal accounts of consequential events.[22] They comprise contextualised interpretations of experience shaped by the experience, social milieu, audience and impact of time on the narrator's perspectives on that experience.[23] We took a constructionist approach, recognising that the participant's re-telling and interpretation of their stories, is influenced by their perspective, previous experience, the audience and the act of telling the story.[24 25] Using narratives from different sources and time points increased the potential of our analysis to provide insight into how personal factors interact with environmental influences and social interactions to inform self-assessment.

THEORETICAL FRAMEWORK

The theoretical framework used for the analysis of our findings is Situated Cognition Theory (SCT).[26 27] SCT, one of the Situativity theories,[27] arose from Bandura's social learning theory.[28] Cognition is recognised in this theory as socially and culturally constructed: any meaning given to an experience is influenced by the interaction between personal beliefs, experiences, emotional responses and environmental factors such as social relationships, interactions and culture. In SCT, the participant and the environment are equal contributors. Both contribute equally to cognition and, in turn, are changed by the interaction.[26 27] When applied to medical student ISA, learning experiences, academic culture, relationships and participant emotional responses are interconnected and influential. ISA is not fixed but contextual and fluid. Thus, SCT provides a useful theoretical framework to understand the interacting and changing influences of medical students' ISA.

RESEARCHER CHARACTERISTICS AND REFLEXIVITY

The research team comprised four female researchers with professional backgrounds in medical education (JMD, WH and SH), clinical medicine (JMD and WH), biological science (SH) and psychology (SR). Two researchers (JMD and WH) were academics within the study setting. The research team provided varied disciplinary, generational and medical school perspectives to improve depth and transferability. Our different perspectives, influenced by personal experience, the literature, our relationships with one another and our roles as educators in different contexts were reconciled through regular discussion and debate to reach consensus.[29] All researchers have experience in qualitative research. SR, a doctoral student with no teaching responsibilities within the school, conducted the interviews to minimise any student perception of coercion to participate or provide favourable responses.

Setting

The study was conducted in a 5-year undergraduate medical programme, located in an outer metropolitan

district of Sydney, Australia with areas of significant socioeconomic disadvantage and ethnic diversity. The programme recruits participants directly from high school as well as university graduates. The first 2 years are predominantly campus-based small group teaching of biomedical sciences and research skills, professionalism with hospital-based teaching of introductory clinical skills. Assessment includes graded and ungraded written examinations and assignments, Objective Structured Clinical Exams, class participation and attendance, supported by interviews with an advisor to discuss a portfolio that includes reflections on learning experiences and a learning plan. There is an annual summative final grade based on written papers. During 2020, the COVID-19 pandemic disrupted usual programme delivery, rapidly shifting to online tutorials and lectures 6 weeks after the beginning of the course. Face-to-face classes briefly returned during the middle of the second year of the study.

Data collection

In 2020, in the second month of the academic year, invitations to participate were emailed to all of the 147 first year students. Participation was voluntary and informed written consent preceded participation. The seven participants who volunteered provided sufficient diversity in terms of gender, age, past study experience and residency to begin analysis.

Data were collected from participants in interviews and written reflections at five time points (see figure 1). Semistructured interviews, lasting 60–120 min, focusing on the participants' approaches to self-assessment and study planning, were conducted three times between March 2020 and July 2021. We did not directly ask about self-assessment influences, so as not to probe the participant. Instead, our interview schedule was designed to elicit narratives about self-assessment during the participants' transition into the medical programme (see online supplemental file 1). For example, we asked about their approach to study planning, and experiences when skills or knowledge had been overestimated or underestimated. Questions for the first interview were piloted with two medical students, a student enrolled in a business degree and two members of the research team to ensure that the questions elicited narratives about self-assessment experiences that would identify important influences. The interview questions at the end of the student's first year (October and November 2020) and mid-way through their second year (July and August 2021) explored preliminary patterns identified in the initial interviews.

The written reflection data were extracted from course assessment tasks. Three weeks after commencing medicine, students write a reflection during a workshop called 'My First Impressions of Medical School' (R1) providing their early impressions and preconceptions about studying medicine. This is a formative task. This task commonly elicits student' concerns about their relative competence in relation to their new peers. In the middle of first year, a written reflection task specifically scaffolds the process of ISA by requiring students to reflect on the evidence of their progress and approach to studying anatomy (R2) (see online supplemental file 1 for reflection task descriptions). This task is a compulsory, criterion-referenced assessment of reflection writing skills and is graded satisfactory or unsatisfactory by medical school academics including JMD. These reflection writing tasks were chosen because they specifically provide descriptions of ISA. One provided information about self-assessment in comparison to peers, the other self-assessment in regards to early academic achievement.

Figure 1 summarises the data sources and timing of data collection.

Data analysis

Interview recordings were transcribed verbatim by a transcription service. Transcripts and written reflections were deidentified by SR before analysis using NVivo software (V.12: QSR International Pty). The narratives were

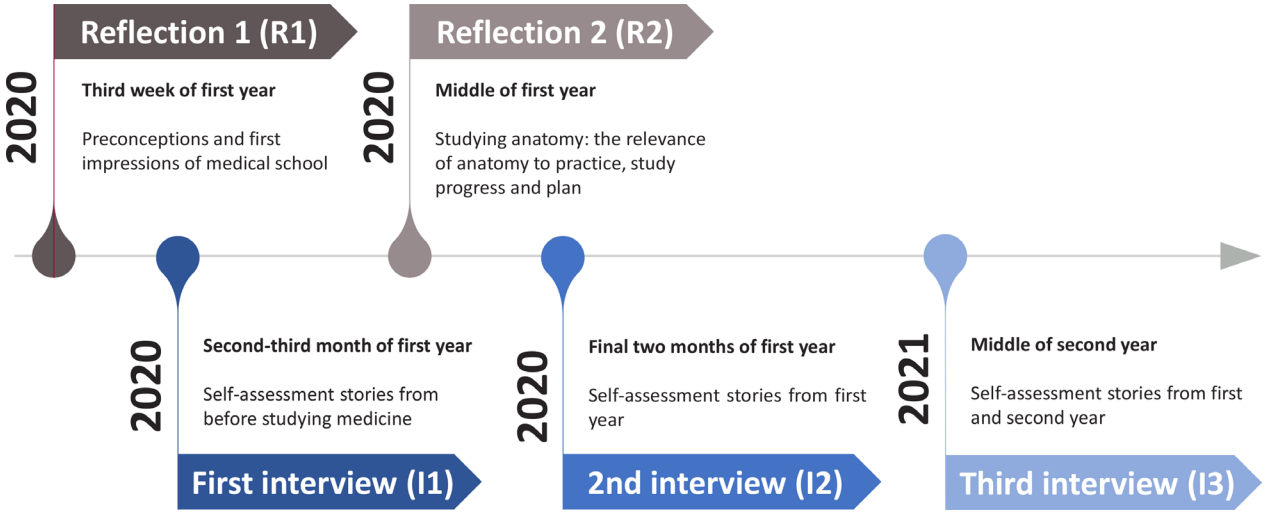

Figure 1 Datasources and timing of data collection. Diagram template designed by PresentationGO and used with permission.

extracted from the interview transcripts and reflections by JM.

The extracted narratives from the interview transcripts were read repeatedly to identify patterns in plots, contexts, consequences and chronological arcs related to self-assessment following the guidelines for dialogic narrative analysis, a constructionist narrative approach.[25] These patterns were recorded, grouped into story types and mapped to a time line. Analysis continued iteratively and reflexively until no new patterns or story types emerged in the interview transcripts. Additional data from the reflections were then explored for the identified patterns and story types within each of the participant's narratives. Cross-case comparative analysis[21 30] collated the interview and written data so narrative patterns could be compared and contrasted over time.

We were satisfied that our data were sufficient in information power to address our research questions, because of the diversity in our participant backgrounds and different data sources from which the narratives were drawn. Furthermore, our analysis was informed by an established theory and led to refinement of an existing conceptual model.[31]

The narrative patterns were discussed at regular research team meetings (SH, WH and JMD) until consensus was reached that four underlying themes in the narrative patterns provided a robust and coherent description of the most important influences of self-assessment over time.[32] Interpretation of the findings was informed by the central idea in Sargeant *et al*'s conceptual model of ISA[6] and SCT[26] that during self-assessment, internal and external cues interact and need to be reconciled. The themes representing participant and environmental influences of ISA were identified within cases, contexts and time periods. Changing patterns in these themes were used to understand how these influences balanced and interacted with one another as described in SCT.

Patient and public involvement

The questions for the first interview schedule were piloted to ensure that the questions were acceptable and that they sensitively elicited narratives about self-assessment experiences. Preliminary findings were presented to academic peers and postgraduate students for feedback.

RESULTS

Fifteen interview transcripts of audio recordings lasting 13.5 hours and 12 written reflections from seven participants totalling 2600 words were collected and analysed. Demographic details and academic performance data were drawn from university records. The participants included three participants directly from high school, three with prior university experience and two university graduates with employment experience outside of healthcare. Individualised characteristics are not provided to protect participant privacy. Four participants were female and three were male, and academic achievement at the end of first year included three distinction or high distinction passes, three pass or credits and one participant, Participant 4 (P4) who withdrew from the course after failing his first semester. P4's first interview and reflection were included for maximum variation in student academic achievement. Data were not available for all participants at all study stages. A table of the final dataset is provided in the online supplemental file 1.

Four interconnected themes underscored the changing participants' narratives of self-assessment during their transition to medical school. Narratives describing environmental influences were *Successes* and *Peer comparison*. Participant influences of self-assessment were represented by the narrative themes of *Fear of failure* and *Belonging*.

A description of these themes with illustrative quotes follows. Quotes are labelled 'I' denoting interview and 'R' denoting written reflection data. The numbers indicate which interview or reflection task as shown in figure 1. 'P' indicates the participant.

Successes

Narratives of successes informing self-assessment were shared by all participants in their interviews and reflections.

From before entry to medical school, the participants, P1 and P3, told narratives of career successes measured through personal satisfaction and feedback from colleagues. P1 described in the first interview at the beginning of first year, a successful work project where 'by chance, ability matched the circumstance over a prolonged period'. The resulting 'sense of achievement' was 'more personal than other people telling you about it; you know that it worked' P1 (I1)

For the high school leavers (P2, P6 and P7), and for those who had hoped to transfer from another course to medicine (P1 and P5), self-assessment prior to starting medicine was informed by school exam results and university grade point averages. These participants attributed past academic successes to effort, rather than ability, study skills or good fortune. All participants offered selection into medicine as an example of deserved achievement through effort: it was 'affirming and confirming that, yes, what you did you did really well' P1 (I1); and 'just a moment of, well; I've gotten to where I've worked so hard to be' P7 (I1)

In the anatomy reflection (R2), midway through the first year, participants described how they had adapted study techniques to ensure exam success. For most, passing the anatomy exam was the evidence used for self-assessment.

Not all the participants' self-assessment narratives were about exam successes. By their second interviews, at the end of first year, P2 reported an increase in confidence, P5 and P7 both described improved communication skills and for P6, moving out of home and living independently was a significant achievement.

Familiarity with the medical programme's assessments gave participants greater confidence in their ability to predict exam performance and moderate the study effort

required. They now had an approach to study planning based on experience and no longer felt 'completely lost' P1 (I 2):

> So if you have an idea of the assessment standards and what they expect and the difficulty of assessments, and then you already know how much effort you put into studying before those, and then you can gauge that, how much you need to put in the next semester to have the same results. P6 (I2)

The participants also reported that their portfolios provided a sense of progress through success that ISA:

> It was good scrolling through and seeing all the things I've done at this semester, so it kind of put a lot of things I've learnt right in front of me on just one page, so it was good to say that I've made so many achievements this semester. P5 (I2)

Peer comparison

In the first reflection and interview, participants compared themselves with their peers.

In the first impressions reflections, (R1) in the third week of term, it was clear the participants were forming opinions of their new peers. Initial impressions were mixed. P2 and P5, who later talked about the importance of peer relationships, both remarked positively about their peers in their first reflection saying: the group was a 'diverse and supportive cohort' (P2), 'really intelligent and kind' (P5). All participants expressed uncertainty about their academic capability in relation to their peers, wondering whether they were not 'quite the same level as the other people that would apply' P6 (I1)

Early in first year, the participants described using peer class performance to inform self-assessment. In problem-based learning (PBL) tutorials, P5 said: 'So if I compare myself to them…it's a good way to see my learning' (I1). Peer comparison, could lead to feelings of being an imposter 'so therefore you just kind of play along' P3 (I1) and self-doubt: 'I remember going into PBL and just feeling really dumb because I didn't really know what was happening' P2 (I1).

By the end of first year (I2), the participants described feeling more comfortable within the group, and peers shifted from being competitors to a source of motivation, learning and admiration. For P1, this shift allowed self-assessment to be based on personal progress rather than peer comparison:

> There are people who are going to get better marks than you because they're better at something…So it changes your approach to learning a little bit. It makes you a bit more tolerant of your own abilities… So you actually work harder, but you also don't beat yourself up if you don't get 100%. P1 (I2)

Fear of failure

Narratives relating to fear of failure dominated the first reflection and interview. For some participants this theme continued into their later interviews.

When participants talked about their experiences before starting medical school, most vividly recalled the self-doubt and disappointment associated with failure or under performance. P2 (I1) told a story of not doing well in a school exam that had shaken her self-confidence: 'I think I cried when I got that mark back then because I was so disappointed in myself and I think it took me a while to recover… so I thought this is me now, I can't do well or something'.

Past exam success, did not necessarily mean participants were confident in their ability to succeed in medicine. In their First Impressions reflection (R1), all participants remarked that medicine, as they had anticipated, was a difficult course with 'a lot of content at a very fast pace'. Many of the participants had learnt to maintain motivation and avoid the disappointment of failure by underestimating their skills and knowledge.

> Well, I think…back in high school, I overestimated my ability for a particular test, and because I'd overestimated my ability I was not performing to my best in exams. P7 (I1)

Another strategy participants described to avoid the disappointment associated with failure was to reframe failure, as a challenge to work harder or adapt to ensure success. At the end of first year, P2 recalled an early experience in a PBL tutorial:

> I think at first it was like 'oh, maybe I'm not smart enough', but then I realised on reflection I don't think I did the best preparation … I don't think it's impacted my confidence in my abilities too much but it was definitely a big wake-up call. P2 (I2)

This was echoed in P2's anatomy reflection when disappointment related to 'subpar' exam results had stimulated a new plan for study.

By the end of the first year, the participants' showed more tolerance for failure. Self-assessment was no longer entirely informed by exam results. P2 (I2) had developed the confidence to get some answers wrong saying, 'So I wasn't too surprised or flustered in the exam when there were those questions that I couldn't do…I just kind of just let them be and I got the result that I kind of expected…'

The exception to this increased confidence was P3, an older student, who had not made many friendships within the cohort. Despite excelling in most exams, P3 remained anxious and fearful of exam failure 'especially how heavy they're weighted' (I2)

In the interviews in second year (I3), when participants were asked if they had ever purposefully underestimated their performance, their responses confirmed our impression. All described purposefully underestimating their knowledge. For example, P2 held back on answers in PBL for fear of looking foolish to future colleagues.

She underestimated her knowledge and chance of giving the right answer, to avoid peer criticism. P5, on the other hand, was now happy to 'admit when I don't know something' in clinical classes because 'they're all really good friends to me in class, so… it's hard for me to get embarrassed in front of them'. Although P3 had now found a place in a peer group by the middle of second year, exam anxiety persisted so, she continued to set the 'bar low' to avoid disappointment about exam performance.

Belonging

Narratives of belonging were evident throughout the data. Initially, participants described situations where they felt they might not belong. Later, narratives were more likely to describe experiences of belonging.

The fourth theme, a sense of belonging to their medical cohort, emerged during first year through friendships. Friendships among the cohort led participants to 'feel connected' knowing 'everybody else is in the same boat' P2 (I2).

P6 explained in his first interview how important early exam success would resolve the early uncertainty about not belonging.

> I suppose, the worst part would be if you failed the med exam because that's, kind of, telling you that you made it here but are you really suited to be here? P6 (I1)

Another influence contributing to a sense of belonging were learning experiences that were engaging and felt relevant to being a doctor. This included anatomy and introductory clinical skills tutorials which both reignited the motivation to study medicine. P5 told a story about the impact of a hospital tutorial his student group had tried to formulate a diagnosis on the basis of scans and interviewing a patient:

> It just motivated me more to try and learn as much as I can to be able to help all the patients in the future… P5 (I2)

These experiences validated the participants' choice to study medicine and increased the importance of clinical skills progress as a self-assessment measure.

So by second year, the ability to apply knowledge in clinical encounters and passing exams ISA. P3, the student who continued to talk of feeling like an imposter in the middle of second year, described the irrelevance of knowledge that could not be applied in practice:

> I guess you can get your exam marks back and say, 'Oh, yeah, I can be a doctor,' but…if you can't actually put that theory into practice, you're as good as tits on a bull. P3 (I3)

DISCUSSION

Early in the transition to medicine, successes and peers ISA. This is similar to the external data (assessments, feedback and informal interactions) used by senior medical students to inform self-assessment in Sargeant *et al*'s conceptual model.[6] The interpretation of available evidence was initially influenced by the personal factors: fear of failure and not belonging. These influences created uncertainty and led to underassessment.

Friendships, successful exam performance, a portfolio of achievements and learning experiences that allowed the participants to apply newly acquired knowledge in clinical settings, provided a sense of belonging and progress. Belonging meant that from the end of first year, self-assessment was less influenced by the need to avert failure or unfavourable comparison with peers. The security provided by belonging meant that while exam performance still guided study efforts, participants could use evidence of progress towards future practice to inform their self-assessment.

Our findings support SCT, which predicts that environmental and participant influences, not only interact but also influence one another over time. Our study extends Sargeant *et al*'s conceptual model of ISA[6] by providing insight into how belonging and fear of failure influences self-assessment during the transition to medicine. This insight also provides an explanation for why self-assessment accuracy improves with experience.[15]

Figure 2 illustrates the shifting balance between the personal and environmental influences of ISA in early and late first year.

Belonging has previously been shown to be linked to academic progress,[33] motivation and well-being,[34] and is a recognised step in professional identity formation.[35] It was not a recognised factor in Sargeant's conceptual model of ISA.[6] The experiences that enhanced the participants' sense of belonging shared characteristics with 'transformative experiences' in tertiary education: that is, experiences that allow students to apply knowledge and expand their understanding.[36 37] In this study, belonging coincided with a shift towards a more mature approach to ISA grounded in personal progress and long-term goals rather than avoidance of failure in exams. This finding reinforces the importance of early clinical experiences and the fostering of social connections between students through small group teaching and group work, particularly with the trend towards more online teaching and learning since the COVID-19 pandemic began.[38]

Exam performance remained an important means of measuring progress in knowledge acquisition and guiding study effort for our participants. This is one of the ways assessment drives learning.[39] However, a predominance of graded assessments potentially heightens the fear of failure for medical students who have limited experience and tolerance for academic failure.[40] Some of the participants reframed failure as a challenge and became more tolerant of failure over time. Frequent, formative assessments[41 42] and feedback[43] during first year would enhance this trend and provide valuable information for ISA. Our participants' favourable comments about portfolios are in keeping with the evidence that portfolios supported by

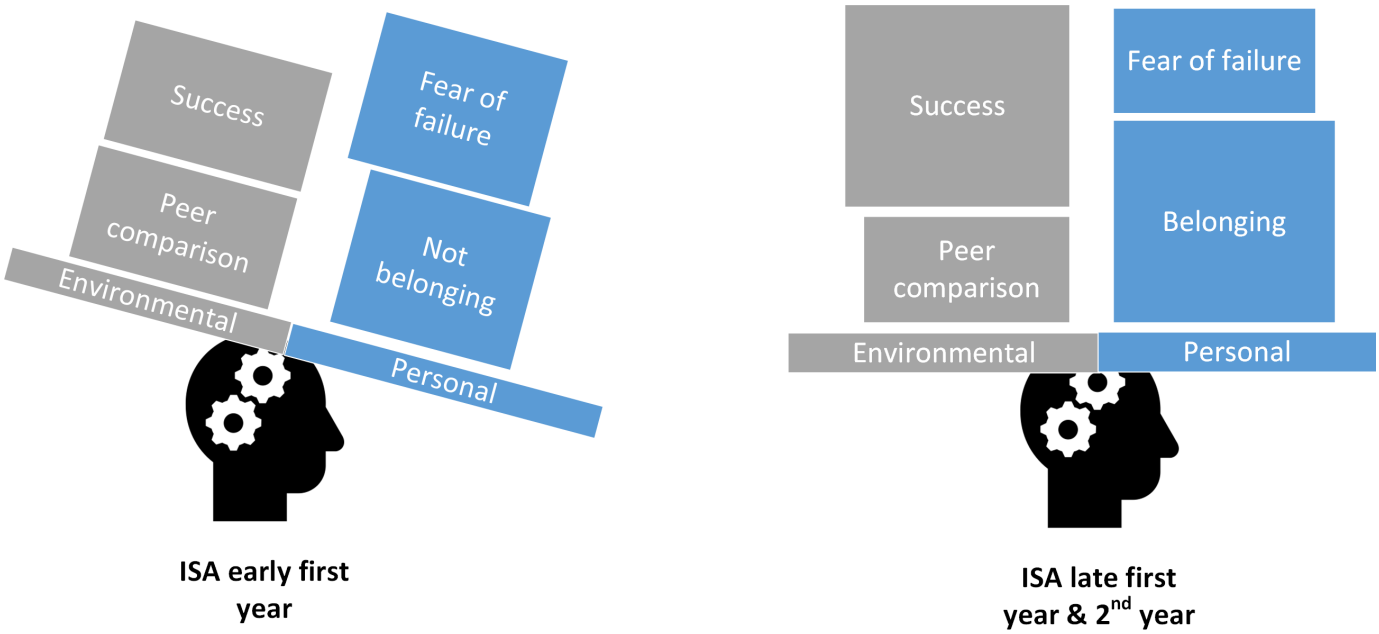

Figure 2 The shifting balance between the personal and environmental influences of ISA in early and late first year. The figure was created by the authors using an icon from Microsoft PowerPoint (2016). ISA, informed self-assessment

mentors encourage the self-awareness and reflection on experience[44 45] necessary for ISA.

Our findings offer an explanation for why self-assessment improves during the transition to medical school. Course familiarity[11] is not the only factor influencing the changes to ISA during transition. The impact of early successes, peer friendships and the sense of belonging on ISA during other transitions in medicine and in on-line learning needs to be explored further.

The trustworthiness of our findings was enhanced by analysing data from different sources, elicited from students under different circumstances. Specifically, from compulsory written reflections, written for an audience of markers, and from interviews, which students voluntarily participated in for the purposes of research. Our data were drawn from a diverse sample and a theoretical model informed the interpretation of our findings. Through these approaches, clear patterns emerged from what could otherwise be regarded as a limited number of participants.

Participant retention limited the final data collection point. This limited the conclusions that could be drawn from the second year of study. We also acknowledge that the students' written reflections and interview responses may not have captured all influences on self-assessment. For example, the influence of personal attributes, such as perfectionism could not be ascertained from our data. Our sample was drawn from a single institutional context and cohort, which could limit transferability to other contexts. It would be interesting to study self-assessments in a programme with more formative assessments or greater emphasis on assessment 'for' and 'as' learning.

Participants may have self-selected with a desire to meet perceived expectations of being a medical student. Interviews being conducted by a researcher unconnected with the course, together with sampling over 18 months from different sources minimised the impact of such responses. Participants were informed that the study related to self-assessment and thus were afforded the opportunity to consider deeply their progress and self-assessment processes through involvement in the study. Their responses, therefore, may not be representative of participants who did not take part in the study.[46]

Our participants formed friendships and had positive early clinical experiences despite the shift to predominantly online learning during the COVID-19 pandemic. Without restrictions on socialisation and clinical learning, the pattern in changes in ISA may have been shorter and other influences may have been identified. However, it is also likely that with the trend to increased online learning, our findings will remain relevant.

CONCLUSION

The influences on medical students' ISAs change during the transition to studying medicine. On entry to medical school, the interpretation of exam performance and peer comparison is influenced by a fear of failure and of not belonging. Peer friendships, early academic successes and clinical experiences promote a sense of belonging. Belonging assists in resolving tensions created by peer competition and the fear of failure. With a sense of belonging, self-assessment can be informed by evidence of progress towards clinical competence rather than exam performance alone. Our findings emphasise the importance of formative assessments, supported reflection on progress, opportunities to mix with peers and early clinical experiences in supporting ISA through enhancing a sense of belonging.

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Patient consent for publication Not applicable.

Ethics approval Ethical approval for this study was granted by Western Sydney University Human Research Ethics Committee (ID No. H9989). Written informed consent was obtained from all participants.

Provenance and peer review Not commissioned; externally peer reviewed.

Data availability statement The raw data collected for this study are not publicly available due to the personal nature of the topic and potential for participant re-identification. Aggregate deidentified data are available on reasonable request.

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