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Implementing the Multiple Mini-Interview for Value-Based Undergraduate Nursing Admissions: Qualitative Study

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Abstract

Background

Nursing is a profession founded on core values such as empathy, integrity, and effective communication, which are essential for delivering high-quality care. Academic competence alone does not guarantee professional suitability, and admissions processes based solely on cognitive criteria may overlook applicants whose personal attributes align more closely with the demands of nursing practice. Values-based selection approaches, such as the multiple mini-interview, provide a structured and consistent method for assessing non-cognitive attributes. This study draws on the experiences and reflections of admissions committee members to evaluate the suitability of the multiple mini-interview for undergraduate nursing admissions.

Methods

A qualitative descriptive design within an action research framework was employed. Data were collected through a semi-structured focus group interview with eight admissions committee members, all of whom had participated in two multiple mini-interview admission rounds. Data were analyzed using thematic analysis.

Results

Three main themes emerged: perceived strengths, highlighting the multiple mini-interviews' structured and equitable nature; assessment complexities, including time constraints, evaluator fatigue, and challenges in assessing personal values; and learning through practice and iterative improvement, reflecting how repeated implementation enhanced evaluator confidence and consistency.

Conclusion

The multiple mini-interview is a promising method for assessing key non-cognitive attributes in undergraduate nursing admissions; its structured format and clear evaluation processes support fairness and reliability, suggesting its potential to enhance values-based selection practices.

BACKGROUND

Demographic shifts and the growing demand for healthcare services have resulted in a global shortage of healthcare professionals, with a particularly acute need for qualified nurses. As societies become increasingly diverse, applicants to nursing programs represent a wide range of cultural backgrounds, attitudes, and personal values. This diversity enriches the nursing profession but also presents challenges for educational institutions in selecting students whose personal attributes align with the core values and professional expectations of nursing. At the same time, nursing education programs face mounting pressure to ensure that students not only enter but also successfully complete their studies and transition effectively into the workforce.

Student attrition in higher education is influenced by a complex interplay of personal, academic, and socioeconomic factors; however, notable contributors to dropout rates, as identified in several European studies, include academic underperformance, financial challenges, wrong career choice, and dissatisfaction with clinical training environments (1–4) For example, Canzan et al. (2022) highlighted that students who discontinued their studies often reported insufficient psychological resources to cope with the demands of nursing education and the profession. Joubert et al. (2022) concluded that a comprehensive and holistic admissions process is necessary to select the best possible nursing students whose values are consistent with those of the profession and who will provide value-based, high-quality nursing care in their future professional careers (5).

In response to these challenges, there is growing recognition that cognitive skills alone are insufficient predictors of student success in nursing education. An increasing number of studies advocate for the inclusion of non-cognitive skills—such as motivation, resilience, empathy, communication, and professionalism—in the selection process for healthcare students (6–9). Non-cognitive attributes reflect personality traits, attitudes, and behavioral tendencies; they are considered essential for both academic persistence and professional competence (10, 11).

To evaluate these attributes systematically during admissions, several healthcare institutions use the multiple mini-interview (MMI), which is a structured, station-based interview format designed to assess applicants' values, attitudes, and non-cognitive skills through brief scenarios and role-play exercises conducted by multiple interviewers (5, 7–9, 12). Although implementing the MMI is resource-intensive, this method allows for the assessment of the values and personal characteristics that form the basis for a career in nursing (5). Indeed, a much more comprehensive overview of the candidates is obtained, because the answers to the questions and the solutions to the tasks are assessed consistently (13). Additionally, investigations into student perceptions indicate that candidates perceive the MMI method to be a fairer and more comprehensive evaluation process than traditional interviews (8, 14). Research has suggested that the use of the MMI may help mitigate dropout due to professional misalignment, as students with higher MMI scores are more likely to persist in their studies and perform well in clinical placements (6, 12, 14). However, the effectiveness of this method in identifying academically stronger candidates cannot be considered sufficiently proven (14–16).

Historically, the nursing program at *XX, (blinded for reviewers)* has relied exclusively on a cognitive ability test to determine candidate rankings during the admissions process. While this approach effectively assesses candidates' intellectual capabilities, it does not capture the full spectrum of qualities required for competent nursing practice. The initial implementation of the MMI thus represents a promising advancement in the selection process. However, for the long-term success and contextual relevance of this method to be established, empirical evidence supporting its validity and effectiveness within the specific educational environment is necessary. Such evidence is crucial for informing decisions regarding its integration into existing admissions procedures and ensuring that the evaluation criteria align with the professional demands of nursing.

Despite the growing scholarly interest in the methodological aspects and candidate outcomes associated with the MMI, little attention has been paid to the perspectives of the admissions committee members. These evaluators play a vital role in the implementation and perceived validity of the MMI. Understanding their viewpoints can contribute to the development of a more effective and contextually appropriate assessment framework. This article, therefore, examines the experiences and reflections of admissions committee members for an undergraduate nursing education in Estonia, while the broader study develops, pilots, and adapts the MMI for selecting undergraduate nursing students within an action research framework.

METHODS

Conceptual Framework and Study Design

Qualitative descriptive research is embedded within action research and grounded in Schwartz's theory of values and personality (17, 18). Schwartz's theory presents a comprehensive and empirically supported model of universal human values that highlights the pivotal role of personal values in shaping attitudes, decision-making, and social interactions. Within the nursing profession—where values such as empathy, collaboration, honesty, and responsibility underpin ethical and effective practice—this theoretical framework provides a compelling foundation for examining the design and implementation of a values-based admission process.

Action research is a collaborative and cyclical research approach, which makes it particularly well-suited to educational settings. It enables improvements to practice through inquiry and critical reflection (19) while also addressing the interpretive processes through which participants construct meaning in their actions and social interactions (20). In the context of this study, action research supported the co-construction and iterative refinement of an MMI method for undergraduate nursing admissions. The project unfolded in four phases between January 2024 and September 2025 (Fig. 1) and was coordinated by a principal lecturer *(XX, blinded for reviewers).* A core working group, comprising seven staff members, was responsible for designing, implementing, and evaluating the MMI-based admissions process. To foster collaborative learning and reflexivity, the team convened regular meetings and facilitated structured discussions, oral reflections, and dialogic exchanges in line with the action research cycle of planning, acting, observing, and reflecting. Data was generated through informal conversations, field notes, questionnaires, and semi-structured interviews with admissions committee members and first-year nursing students.

The first full admission round with the MMI was conducted in July 2024. Each applicant rotated through seven stations within a 35-minute session, where they either participated in a role-play or engaged in a structured discussion based on a predefined scenario. The admission interviews were conducted over five days, involving 309 applicants and 18 interviewers. As undergraduate nursing students are admitted twice a year, a second round of admissions followed in December 2024. During this round, 136 candidates were interviewed across four days by 16 members of the admissions committee. This article

focuses on the experiences and reflections of committee members who participated in these two admission rounds; in doing so, it aims to explore how they perceived the implementation of the MMI method and its suitability for values-based selection in nursing admissions.

Sampling and Data Collection

A qualitative descriptive design was used with a semi-structured focus group interview to explore the experiences of admissions committee members. The committee was composed of both academic and non-academic staff, thus ensuring a diverse range of perspectives. The diverse composition of the committee was particularly instrumental in developing interview scenarios for applicants. While academic staff focused on ensuring the professional and disciplinary relevance of the content, non-academic members drew attention to instances where specialized terminology or specific language might disadvantage candidates, thereby supporting the creation of more accessible and equitable assessment tasks.

The focus group interview was conducted in January 2025 as part of the third action research phase. In total, 12 people participated on the admissions committee in both admission rounds (July 2024 and December 2024); all of them were invited to the focus group interview, and eight admissions committee members who had participated in both admission rounds took part in the interview. The focus group lasted 1.5 hours, was facilitated by two researchers *(XX, XX, blinded for reviewers)*, and followed a semi-structured interview guide developed for this study (Supplementary file 1). The focus group interview was audio-recorded and transcribed verbatim. The committee's feedback and reflections provided valuable input for refining the process and for aligning the admissions approach more closely with contextual and value-based considerations.

This study was approved by the Research Ethics Committee of the University of Tartu (No. 395T-8), and all procedures were conducted in accordance with ethical guidelines and the principles of good scientific practice. Written informed consent was obtained from all participants prior to the commencement of the focus group interview. Participants were fully informed about the study's purpose, benefits, and their right to withdraw at any time without penalty.

Data Analysis

The transcribed and de-identified interviews were analyzed using thematic analysis, which enabled us to explore participants' experiences in depth by identifying key themes that reflect their perspectives. Thematic analysis offers a structured yet flexible framework for examining complex data that enables the identification of meaningful patterns (21). The process was conducted independently by four members of the research team. First, two researchers (XX, XX, *blinded for reviewers)* conducted the thematic analysis, after which they compared their findings and made revisions through consensus. Subsequently, two additional researchers (XX, XX, blinded for reviewers) reviewed the analysis and provided their comments. All four researchers were involved in the final interpretation and formulation of

the results. We began the analysis by paraphrasing the data, simplifying the text while preserving its original meaning. Next, we consolidated similar data to form clearer segments. We then coded the data by assigning labels to sections of text to capture recurring patterns. This coding process was iterative, and we continuously refined the categories as the analysis progressed.

RESULTS

Initially, committee members emphasized the perceived strengths of the MMI, which they valued for its structured format and its ability to reveal candidates' professional suitability. As they gained experience, they encountered practical and conceptual challenges that highlighted the complexities of fair and nuanced assessment. Through repeated use, however, committee members described a process of learning and refinement as they developed expertise that allowed them to adjust and improve the interview over time. Three interrelated themes emerged from the analysis: (a) perceived strengths, (b) navigating assessment complexities, and (c) learning through practice and iterative improvement.

Perceived Strengths

This theme highlights the perceived strengths of the MMI. Committee members consistently described the MMI as an objective, well-structured process that felt less stressful than a traditional interview. Admissions committee members reflected that collaboration and communication were generally positive. The seven-station format balanced the short 5-minute interactions and supported fairness.

I thought about whether we should reduce the number of stations, but I concluded we should not. A larger number compensates for the short time. There are seven of us contributing to the final decision.

I find the MMI method to be very effective for evaluating candidates, as it allows the assessment to focus on multiple domains rather than relying on a single interview.

Compared to traditional panel or one-on-one interviews, the MMI format is more interactive, objective, and less anxiety-provoking for candidates. The format enabled candidates to display interpersonal traits such as empathy, communication skills, and adaptability, which are qualities fundamental to nursing yet difficult to assess in a conventional interview:

If we take a conventional interview, those kinds of topics never come up. With the MMI, we are already talking about empathy and tolerance—these are such important aspects that this method brings out.

I find the MMI method to be very effective for evaluating candidates, as it allows the assessment to focus on multiple domains rather than relying on a single interview.

The MMI was seen as serving both applicants and assessors: it allowed the committee to evaluate professional suitability while giving candidates insight into their own suitability, potentially reducing attrition. For example, the participants explained:

The reason someone might leave because they don't like the field is something this process helps to rule out quite well.

It probably reduces the number of casual testers.

Well-defined and differentiated evaluation criteria were deemed essential for guiding assessment and minimizing subjective bias:

[…] you have specific assessment criteria in front of you, and if you follow them, then a logic in fact emerges in the assessment according to which you evaluate.

The committee members also observed that, in addition to its direct benefits, the MMI offered indirect advantages by allowing candidates to experience the university's overall atmosphere, thus serving as a bridge to faculty members upon enrollment, and thereby strengthening applicants' motivation, positively influencing the institution's general reputation.

I heard this from the feedback […] that it creates… I don't know if it actually increases it, but rather it may kind of reinforce the desire. Because in my opinion, similar to how they make their high school choices, they visit different schools where they sense the vibe (the 'atmosphere'), and what impression it leaves on them. Here it was the same thing—they sensed the atmosphere, and it also created a desire to come.

Navigating Assessment Complexities

Despite these strengths, participants reported several challenges in the MMI workflow. A limited timeframe and consistent station conditions were intended to enhance transparency and objectivity; however, brief interactions sometimes hindered the reliable evaluation of complex traits, such as empathy and tolerance. Concerns were also raised regarding candidates' potential to provide expected or rehearsed answers rather than authentic responses, particularly when they might have prior knowledge of station questions.

At times, I got the feeling that maybe they just know how to express what is expected and what the correct answer is in that situation.

While supporting objectivity, the intensive process involving multiple stations introduces risks of assessor fatigue and reduced attentiveness. Adjusting the station scenarios and assessment criteria to make them more unambiguous was considered crucial for enhancing clarity and ensuring fairness. The participants also debated how strictly to follow scoring rubrics versus exercising professional interpretation, thus highlighting a tension between fairness and flexibility:

For me, there are two things: one is strict standardization, the other is my own interpretation. Which represents fairness—equal starting conditions or equal outcomes?

Can I actually assess that […]? I was left wondering how a very intolerant person would even appear, how they would express it.

Learning Through Practice and Iterative Improvement

The MMI was described as an intensive process; remaining in the same station enhanced consistency but also created risks of fatigue and reduced attentiveness over time. Consequently, the importance of thorough preparation for committee members was emphasized, with trial assessments, role-plays, and collaborative discussions recommended to strengthen interpretive consistency and ensure fairness and reliability across stations.

We should continue to review and discuss the scenarios, even if we don't change them, to stay aligned.

Committee members recommended continuous revision of station scenarios and evaluation criteria to sustain fairness and accuracy. They suggested integrating a motivation assessment and incorporating props or role-play to help candidates better understand scenarios:

Maybe in one station there should be the question, […] now talk during this time about why we should choose you, right. So, how they justify it at that moment.

We revised the criteria, and they showed us exactly what needed adjustment.

However, some participants questioned whether complex attributes, such as empathy and tolerance, could be reliably evaluated through short interactions.

With empathy… I would say that it is still complicated. It is like… I think the right answers are quite easy to memorize, no matter what situation you are in. It is still possible to add that caring attitude to it.

Over time, members described a clear learning curve that increased their confidence and sharpened their interpretive skills. Experience helped them calibrate expectations and refine their assessments:

The second time went a bit better.

By the end of the day, I developed a kind of model in my head of how to evaluate.

Repeated exposure allowed evaluators to perceive subtleties in candidate responses and to recognize the limits of the scoring system:

By the end I became more understanding; I gained a sense of how people in this age group express themselves and what their words really mean.

Results Summary

As we synthesized the study findings, the analysis indicated that committee members initially acknowledged the MMI's structural strengths and its capacity to identify professional suitability, subsequently encountering practical and conceptual challenges that underscored the complexity of achieving fair and nuanced assessment. Through sustained engagement with the process, they developed experience-based expertise that informed iterative refinements to both the interview format and their evaluative practices. Collectively, these observations depict the MMI as a dynamic and evolving assessment instrument that advances in effectiveness as assessor competence deepens, as illustrated in Fig. 2.

DISCUSSION

The growing demand for qualified nurses underscores the need for admissions processes that consider more than academic performance alone. In response, many nursing programs have introduced the MMI as a complementary tool for student selection. By incorporating the perspectives of admissions committee members, this study provides insights into both the practical implementation and the evaluative utility of the MMI, highlighting its implications for fairness, consistency, and professional alignment in student selection. Understanding the perspectives of admissions committee members is vital, as their experiential knowledge significantly influences the fairness, consistency, and practicality of the assessment process. Their feedback can reveal logistical issues, such as station timing and scoring clarity, that affect the overall effectiveness of the tool. Moreover, exploring their views regarding the MMI can inform targeted training needs and improvements in station design, thus fostering greater acceptance and perceived legitimacy of the assessment process. As non-cognitive attributes are increasingly prioritized in nursing admissions, the role of admissions committee members' experience becomes more significant in ensuring that the assessment accurately and equitably evaluates applicant competencies aligned with professional standards.

Grounded in Schwartz's theory of values, which emphasizes the central role of personal values in shaping attitudes, decisions, and social interactions, this study illustrates how a values-based approach can support the identification of applicants whose personal and professional values align with nursing standards. Attributes such as empathy, ethical integrity, collaboration, and responsibility were observed to be effectively assessed through the MMI, thus reflecting the method's capacity to capture competencies that traditional interviews often overlook (7, 8). Multiple stations and standardized scenarios were perceived as enhancing transparency and fairness, while also providing a comprehensive overview of candidates' interpersonal and value-driven skills, consistent with previous findings (5, 12, 14, 16).

Because this study was designed using the action research approach, the implementation of the MMI provided not only empirical findings but also an iterative process of reflection and adjustment. This dual function allowed for systematic empirical inquiry while simultaneously enabling iterative refinement of the MMI process. Committee members acted as both participants and co-creators of knowledge, reflecting on their experiences to inform adjustments to station design, assessment criteria, and

interviewer training. This cyclical process exemplifies how research can facilitate institutional learning and adapt assessment tools to local educational contexts, thus enhancing both relevance and legitimacy (19, 20).

This study provides valuable insights that are both practical and meaningful for further academic discussion. The findings of this study highlight both the potential and the challenges of using the MMI in the admissions process for nursing students. Admissions committee members perceived the method as fair, structured, and effective in assessing non-cognitive skills, while also acknowledging practical difficulties such as time constraints, fatigue, and candidates' ability to provide rehearsed responses. These insights provide valuable guidance for improving the MMI process to ensure both fairness and relevance in admitting candidates to nursing programs.

According to the study participants, the MMI proved to have several strengths. The structured, station-based format enables applicants to demonstrate their non-cognitive skills such as empathy, communication, adaptability, and tolerance. These are fundamental for nurses but often challenging to capture in traditional interviews, as reported in previous studies (7, 8). From the participants' perspective, the standardized scenarios and clearly defined criteria for assessment enhance transparency and fairness. Additionally, the use of multiple stations provides a comprehensive overview of applicants' interpersonal and value-based competencies, as emphasized by Joubert et al. (2022). These results are in line with prior research indicating that the MMI is effective for evaluating interpersonal and value-based competencies (12, 14, 16). Among the strengths of the MMI, participants also shared that it enables applicants to experience the university environment and reflect on their suitability for the nursing profession. This can help reduce future student drop-out, and it has been suggested that MMI scores are linked to professional alignment and persistence in healthcare education (6, 12). Viewed through the lens of Schwartz's theory of values, the MMI makes it possible to identify applicants whose personal values, such as caring, ethical integrity, and responsibility, are aligned with professional nursing standards. This is needed to establish a strong professional identity and foster long-term success in nursing practice.

Participants shared some challenges they faced in using the MMI. Challenges included time constraints, evaluator fatigue, and the overall intensive nature of the MMI, which is based on close communication between two people. A key contextual consideration is the intensity of the interview periods. In 2024, 309 applicants were interviewed by 18 interviewers over five days, while in 2025, 136 applicants were interviewed by 16 interviewers. These figures illustrate both the logistical complexity and the potential impact of interviewer workload and fatigue on the consistency of assessments. It also underscores the need for careful planning, rotation of interviewers, and strategies to ensure fairness under intense conditions.

Additionally, participants sometimes found it challenging to assess complex personal values, such as deep empathy and tolerance, within the brief interaction between the applicant and evaluator. However, the diversity of evaluators, comprising both academic and non-academic staff, added multiple

perspectives and enhanced the overall fairness of the results. Participants also found it challenging that applicants could potentially provide the answers expected of them rather than authentically expressing their own values, particularly when the applicants can anticipate what is expected. In some cases, participants perceived that applicants had prior access to information about station scenarios, which could potentially undermine the validity and fairness of the process. However, the candidates do not know exactly what criteria are used for assessment, so this concern is not particularly significant. Nevertheless, this challenge highlights the importance of regularly updating the content of the stations, refining evaluation criteria, and ensuring calibration among evaluators to minimize the impact of rehearsed responses. Previous research has also suggested that while some degree of preparation is inevitable, well-designed stations can still differentiate between superficial and genuinely value-driven responses (8, 9). Maintaining the balance between transparency for applicants and safeguarding the authenticity of assessment thus remains a critical consideration in sustaining the MMI's validity.

Participants proposed some improvements that could further enhance scenarios and assessment criteria, as well as the overall suitability and validity of the MMI. Using physical and interactive elements, alongside structured preparation and trial assessments for interviewers, could strengthen the interpretive consistency of the MMI. Previous research has also suggested that MMI performance correlates with professional alignment and persistence in healthcare education (15), thus underscoring the importance of carefully designed stations. Similar conclusions have been drawn out in studies by Joubert et al. (2022) and Sheehan et al. (2022). Indeed, assessing motivation can provide a richer understanding of candidates' readiness and fit for the profession (13). Continuous preparation of evaluators also helps them feel more confident in their evaluations, which can improve the overall credibility and acceptance of the MMI (6, 12). Further studies could investigate which station designs and assessment methods best capture complex non-cognitive attributes, explore the relationship between MMI performance and long-term professional outcomes, and examine strategies to prevent prior access to scenario information from influencing outcomes. This could provide valuable evidence for refining the MMI and ensuring it remains a reliable, valid, and contextually appropriate tool for selecting nursing students.

Strengths and Limitations

This study has limitations, including a small sample size, a specific institutional context, and the absence of longitudinal follow-up, which may limit the generalizability of the findings. Participant responses may also reflect personal biases, and the lack of direct applicant perspectives leaves some experiences unexplored. However, aspects such as the action research design strengthened the value of the findings. Because the challenges and limitations were observed in an authentic admissions setting, they were immediately used to refine scenarios, calibrate evaluators, and develop strategies to ensure fairness. This cyclical process of implementing, reflecting, and improving is a central action research characteristic that allowed the study to generate knowledge that is simultaneously practical, contextual, and transferable. The in-depth qualitative approach also helps to minimize these limitations. The evaluators' experiences offer crucial insights, as they strongly influence both the effectiveness of the

MMI and its ongoing development. These insights enhance the practical relevance of the findings and contribute valuable knowledge for refining the MMI as a selection tool. Future research should, however, include larger samples and examine how MMI performance predicts academic and professional success.

CONCLUSION

The MMI is a promising and contextually appropriate method for incorporating values-based assessment into undergraduate nursing admissions. Committee members valued its structured format and capacity to capture some of the non-cognitive attributes essential for nursing, while also identifying challenges such as limited interaction time, interviewer fatigue, and the potential for rehearsed responses. Iterative refinement of scenarios, clear assessment criteria, and systematic evaluator preparation were considered vital for ensuring fairness and reliability.

Abbreviations

MMI: multiple mini-interview

Declarations

Ethics approval and consent to participate: The study was approved by the Research Ethics Committee of the University of Tartu (No. 395T-8), dated 16 November 2024. Participants were informed about the study's purpose, and written informed consent was obtained from those who volunteered. The researchers ensured participants' privacy and confidentiality. This study protocol was conducted in accordance with the provisions of the Helsinki Declaration.

Consent for publication: Not applicable. The manuscript does not contain an individual person’s identifiable data requiring consent for publication.

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Authors' contributions:

MV: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Project administration, Writing – drafting the article and revising it, Final approval of the version to be submitted.

ML: Data curation, Formal analysis, Methodology, Writing – drafting the article; Final approval of the version to be submitted.

GM: Data curation, Formal analysis, Methodology, Writing – drafting the article and revising it; Final approval of the version to be submitted.

KH: Writing - Drafting the article and revising it; Final approval of the version to be submitted.

SL: Writing – original draft, Writing – drafting the article and revising it; Final approval of the version to be submitted.

RU: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Writing – Drafting the article and revising it; Final approval of the version to be submitted.

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Figures

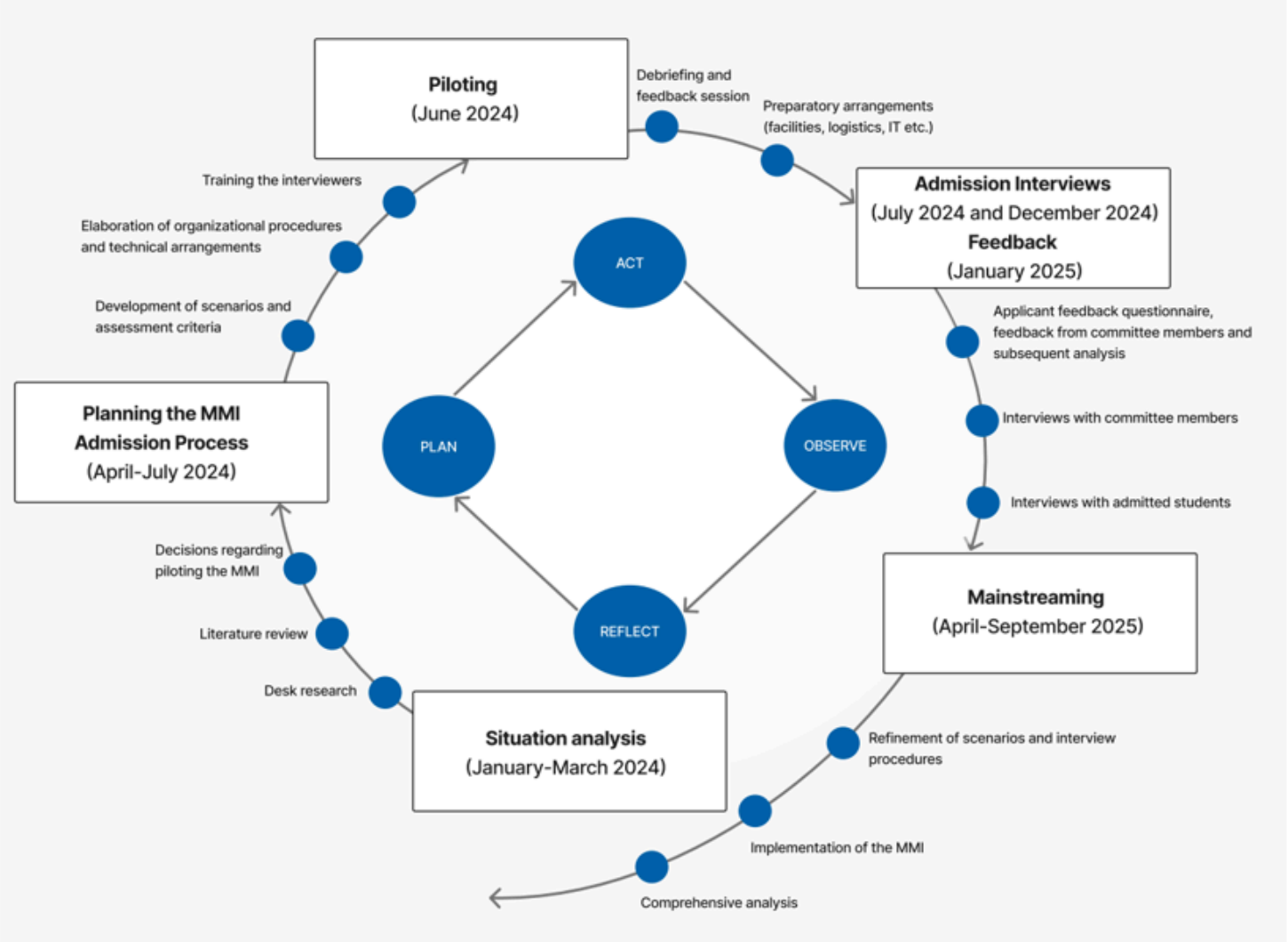


Figure 1

Co-construction and iterative refinement of an MMI method for undergraduate nursing admissions.

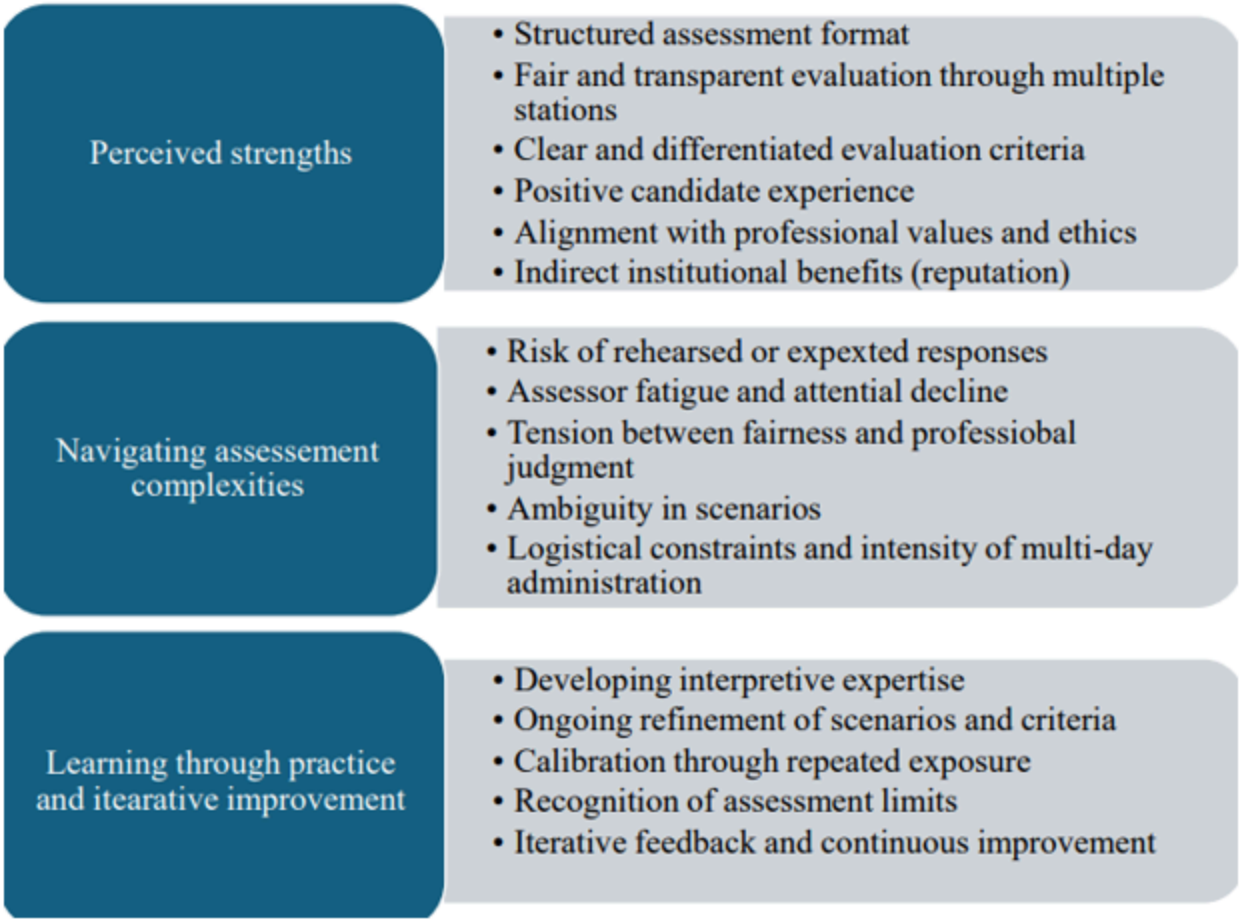


Figure 2

Dynamic relationships among perceived strengths, assessment challenges, and assessor expertise in the MMI

Supplementary Files

This is a list of supplementary files associated with this preprint. Click to download.

- Supplementary1.pdf