

## Brief report

## How many schools adopt interviews during the student admission process across the health professions in the United States of America?

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### Abstract

Health profession schools use interviews during the admissions process to identify certain non-cognitive skills that are needed for success in diverse, inter-professional settings. This study aimed to assess the use of interviews during the student admissions process across health disciplines at schools in the United States of America in 2014. The type and frequency of non-cognitive skills assessed were also evaluated. Descriptive methods were used to analyze a sample of interview rubrics collected as part of a national survey on admissions in the health professions, which surveyed 228 schools of medicine, dentistry, pharmacy, nursing, and public health. Of the 228 schools, 130 used interviews. The most desirable non-cognitive skills from 34 schools were identified as follows: communication skills (30), motivation (22), readiness for the profession (17), service (12), and problem-solving (12). Ten schools reported using the multiple mini-interview format, which may indicate potential for expanding this practice. Disparities in the use of interviewing across health professions should be verified to help schools adopt interviews during student admissions processes.

**Keywords:** Cognition; Motivation; Students; Surveys and questionnaires; United States

Prior research has shown that success in the health professions depends on more than academic qualifications. Non-cognitive skills such as communication, motivation, and empathy aid health professionals in providing quality care [1]. As the primary educators of the health workforce, health professions schools must ensure that methods used to admit students take into consideration qualities that predict both academic and career success. An in-person interview, whether conducted individually or in a group setting, is one element of a holistic admission process [2] that can help schools better

evaluate a prospective student's potential [3,4]. The multiple mini-interview (MMI), in which applicants rotate among stations of evaluators, has been shown to be cost-effective, efficient, and easy to implement [5,6]. When used to select applicants, the MMI process has demonstrated predictive validity for future clinical performance [1]. Interviews have been an integral part of the medical school admissions process for many years. However, less is known about the extent of use of interviews in other professions, as well as the nature of the interview process and eventual impact on student success outcomes in these disciplines. This study aimed to assess the prevalence of interviews among health profession schools and variation across disciplines, types of non-cognitive skills evaluated during the interview process, and methods used to conduct interviews.

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The study described health profession schools' processes for interviewing applicants. Information about these processes was submitted as part of a larger United States of America-based survey on holistic review in the health professions conducted by members of the research team [2]. The sample for that survey was constructed by searching for public universities with health profession schools in the USA. Due to the small number of dental schools and the need to construct a minimum sample, all USA-based dental schools (both public and private) were sent a survey. The Department of Education's Integrated Postsecondary Education Data System (IPEDS) was used to construct a randomized list of health profession schools within each profession; duplicate entries were then removed to create a final list of university names. A total of 228 health profession schools were surveyed at 104 universities, including schools of medicine, dentistry, pharmacy, nursing, and public health. The number of schools using interviews was compiled using data from one of the survey questions: "Which of the following processes characterize the secondary screening of applicants? A) a subset of applicants are invited to submit a secondary application; B) a subset of applicants are invited for an interview; C) both A and B above; D) other (please specify)." Qualitative information was submitted in response to the following question: "If the institution has an interview rubric that can be shared, please copy and paste it here." Raw data were categorized by the number and type of non-cognitive skills cited in the school's qualitative response, as well as the reported method used for assessment of non-cognitive skills: individual interview, MMI, or in-person writing exercise. Data were cross-tabulated by type of health profession school.

One hundred and thirty of the 228 schools subjected (57.0%) reported using an interview process. Use of interviews varied significantly across the five health professions. For example, all but one of the 36 pharmacy schools surveyed reported the use of an interview (97.2%); while, 6 out of 39 (15.4 %) public health programs, 38 out of 43 (88.3%) dental schools, 38 out of 44 (86.4%) medical schools, and 13 out of 66 (19.7%) nursing programs reported it.

Ninety-three (71.5%) of the respondents that reported using interviews indicated that they used a specific rubric and 52 (40.0%) provided qualitative responses to the question. Qualitative responses were analyzed for common themes. Of the 52 schools that provided qualitative responses, 34 (65.4%) provided information specifically related to assessment of non-cognitive skills. Of the 34 schools that listed a desirable non-cognitive skill, 88% of them stated that their ideal candidate would possess good communication skills –making this the number one most common student attribute that health profession schools assessed. The top five most desirable non-cog-

nitive skills are as follows: communication skills (30), motivation (22), readiness for the profession (17), service (12), and problem-solving (12). Schools also evaluated extroversion (11), maturity (6), cultural competence (3), personal appearance (3), and manual dexterity (2).

Of the 52 schools that provided qualitative responses, 42 (81%) provided information in their responses about interview procedures and policies. Thirty-one schools (73.8%) reported using an individual interview and 10 (24%) reported using MMIs: 7 schools of medicine, 2 schools of pharmacy, and 1 school of dentistry. Two schools of medicine reported using both an individual interview and the MMI. The format of the MMI varied. Half of the schools that reported using MMIs asked between 6 and 10 questions; the other half did not specify the number of questions used. Six of the schools using MMIs provided information about the non-cognitive skills assessed using this format as follows: communication (5), ethical/moral judgement (2), problem solving (2), teamwork (2), conflict resolution (1), and interpersonal skills (1). MMIs were described as lasting 8 to 10 minutes per interview station. Only two schools reported using in-person writing exercises. Neither of these schools provided any information regarding the time or length of the writing exercise.

Based on the data collected, interviews are more common among dental, medical, and pharmacy schools than nursing or public health schools. The fact that few of the MPH and BSN program respondents reported using interviews may be explained by the nature of those programs, which is fundamentally different from terminal professional degree programs like the MD, DDS/DMD, and PharmD. A bachelor's level program like the BSN may not have complete control over the admissions process. In the Urban Universities for HEALTH survey, the vast majority of nursing schools reported reviewing applications after the university had accepted students through its centralized undergraduate admissions processes [2]. This limits the size and composition of the applicant pool as well as options for evaluating applicants. The fact that nursing and MPH programs admit more students than medicine and dentistry may also explain why they use interview during admission process less frequently. These data also suggest that health professions programs do value non-cognitive skills and are assessing those skills during the admissions process. However, some non-cognitive skills are assessed more frequently than others. The bulk of respondents reported that they value communication skills and motivation in their applicants; problem-solving and service were less frequently cited. A few schools in the sample reported using the MMI during the admissions process. Although a growing body of literature supports the efficacy of the MMI, the practice is still relatively new and many schools may be unaware of its existence [1,5,6]. Developing

educational programs to help schools learn about and implement the MMI may expand its usage within the health professions, leading to improved student body diversity and student success outcomes.

This study was subject to several limitations. First, submission of an interview rubric was voluntary for survey respondents. Only a portion of the schools surveyed reporting using an interview at all and even fewer chose to share their rubrics with us. Given the small sample size for the qualitative data, we could not determine with certainty how the types of non-cognitive skills assessed varied by health profession, nor could we conduct an accurate comparison of interview methods across professions. Future studies may choose to examine why nursing and public health schools use interviews less frequently than other health professions, and what barriers those schools might face with regard to implementation. With the exception of the dental schools, the survey was administered to public health profession schools only; private schools face a different set of conditions, constraints, and incentives and the authors wanted to insure comparability across the sample. However, the exclusion of private schools may impact the conclusions in unknown ways. Finally, we do not know the extent to which the school's decision to evaluate specific skills was influenced by local workforce needs because we did not collect these data; however, this would be an interesting opportunity for future study.

Further research is needed to evaluate the effectiveness of various admissions strategies including, but not limited to, interviews that will help schools identify critical non-cognitive attributes during the admissions process.

In conclusion, many health profession schools value non-cognitive skills and are assessing them during the admissions process. Although each health profession will have its own set of desirable qualities and skills to be identified in applicants, the alignment across health professions regarding the importance of communication skills and motivation suggests that there may be a core set of professional skills that are important for all health professionals to possess. Identifying this core set of skills and increasing diversity and cultural competence across health professions may help universities produce a more prepared health workforce that will advance health equity in the community.

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## Conflict of interest

No potential conflict of interest relevant to this article was reported. Publication and report contents are solely the responsibility of the authors and do not necessarily represent the official views of the National Institutes of Health or Health Resources and Services Administration.

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## Supplementary material

Audio recording of the abstract.

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