THE POTENTIAL FOR MORAL HAZARD IN AN ALLOPATHIC

INTERVIEW SETTING

A Thesis submitted to the University of Arizona College of Medicine -- Phoenix

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Dedication: to my wife Chesley and my loving parents, Steven and Karen Reeder.

Abstract

The value of an allopathic medical school interview lies in its inherent ability to produce something of value that is unobtainable by other means: a rough assessment of the non-cognitive components of a viable candidate. Many allopathic institutions rely on the interview when determining applicant viability for both professional standards and institutional fit. However, applicants can distort the truth or train themselves to appear to exude any one of a number of admirable qualities for a brief period of time. Responses that reflect socially acceptable answers, rather than the true nature of an applicant's character, represent forms of dishonesty. It is our belief that the high-stakes setting of a conventional allopathic interview creates a moral hazard for prospective matriculates, such that applicants' genuine responses are confounded with social desirability bias. Social desirability is often simplified for the research world to refer to the articulation of both self-deceptive enhancement and impression management (IM). We sought to establish the presence of impression management and/or self-deceptive enhancement tactics among interviewing allopathic medical school applicants. The presence of the aforementioned was determined using the 6th version of the Balanced Inventory of Desirable Responding (BIDR), a validated inventory that relies on 40 self-responses on a Likert scale to common situations. We offered the BIDR interview to all interviewing applicants to the University of Arizona College of Medicine - Phoenix on three of the six interview days. This inventory was administered during a 10 minute break period offered directly after the completion of the university's multiple mini interviews, so as to assess the presence or absence of social desirability as close to the high stakes setting as possible. We received 104 responses, 12 of which were not included in the dichotomous scoring because they were not completed in their entirety. Our findings from 92 allopathic medical school applicant respondents indicated that our average interviewing medical school applicant was engaging in impression management tactics above and beyond the oft-referenced BIDR cutoff values, with an average of 7.543/20; however, they were not engaging in self-deceptive enhancement tactics beyond their BIDR reference peers with an average of 6.27/20. Both self-deception and impression management exist on a spectrum; however the arbitrary cutoffs of

honest impression management established by Paulhaus' 6th version of the BIDR were exceeded. Our results indicate that the context of allopathic interviews is associated with increased levels of impression management tactics; conversely, it is not associated with increased self-deceptive enhancement tactics.

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Introduction/Significance:

a. Background

Social desirability bias refers to the notion of endorsing positive self-descriptions that coincide with societal norms while denying those that reflect socially deviant behaviors. [1] Although several models of social desirability exist, Paulhus' model of social desirability bias is essentially an amalgamation of two distinct constructs, the first being an egoistic bias wherein social status and intellectual capacity are exaggerated; the second being a moralistic bias, which involves abstaining from socially-deviant practices or behaviors. [2-3] What's more, Paulhus postulated that both egoistic bias and moralistic bias have both conscious and unconscious distortions, a concept known as process element. [4] Egoistic bias, for example, can be conceptualized as both an unconscious self-deceptive enhancement and a conscious agency management. Moralistic bias would, consequently, involve the unconscious self-deceptive denial and the conscious communion management.

Social desirability bias' presence can be measured in a variety of ways such as the use of the Marlowe-Crowne Social Desirability Scale, Martin-Larsen Approval Motivation-score measuring social approval, or the Balanced Inventory of Desirable Responding (BIDR). [5-7] This bias, whether intentional or not, becomes manifest in a social context in the following manners: endorsing incorrect information, omitting information, or modifying the magnitude of reported information. Fear of public or private scrutiny often motivates individuals to engage in social desirability bias. A recent study performed among drug abusers demonstrated that those who under-report their abuses experience more social desirable pressure that those who did not under-report. [8] Although research within the medical literature is limited, it would appear that more socially-charged issues encourage greater need to seem socially acceptable, evidenced, for example, by a recent study investigating sex work. [9] Among those who engage in social

desirability bias, age is directly correlated while income and socio-economic status is inversely correlated. [10-11]

Social desirability bias' relevance to medicine cannot be understated, as it pertains to patients' and physicians' social perception of themselves. It also affects the manner in which both parties engage with one another. A review among physicians in regards to their adherence to clinical guidelines indicated that in almost all studies, physicians overestimated their own adherence. [12] In an effort to avoid both public and professional disapproval, these clinicians were not entirely honest in their responses. This bias, which again has both volitional and non-volitional components, occurs in any social context; however, some have proposed that it disproportionately accompanies more socially-charged situations. [13-14] In an interview setting, for example, candidates for occupational or educational training understand that they are competing for limited positions. In the frequently-employed face-to-face interviews, the pressure to impress an interviewer may encourage social desirability bias.

For research purposes, social desirability bias is often simplified into two constructs: the conscious impression management and the unconscious self-deceptive enhancement. Recently, impression management's role in interview settings has been the recipient of increasing interest, as reflected by published literature regarding both the employment and educational interview settings. [15-19] These articles demonstrate the effect of impression management on post-interview ratings: those who engage in impression management tactics obtain higher post-interview ratings.   It is interesting to note that two studies on occupational interviews found that candidates' acumen with impression management differed such that some were talented while others were found lacking. [15,20]

b. Significance and rationale for the research question

Many institutions establish thresholds that must be met or exceeded to demonstrate superior academic performance, but they alternatively lack demonstrable thresholds for character. The

fact that American Medical College Application Service (AMCAS) doesn't administer a standardized test for character says something about the subjective nature of determining who is and isn't fit for medicine. The task, then, of valuing certain virtues over others is relegated to individual institutions; they must determine virtues that are harmonious with medicine's vocational standards and requirements. Traditionally, this vetting of character is performed with a limited assortment of tools: letters of recommendation, a personal statement, response(s) to essay question(s), and interview(s). With what little data exists, several studies indicate that the most important non-academic determinate for matriculation is the interview. [21-23] Indeed, Puryear and Lewis indicated that of the 107 responsive allopathic medical schools, 61% reported the interview as the most important component used in selection of matriculates. [21]

If these data from the early 1980's applies, even remotely, to current admissions processes, then research that evaluates the use of non-academic criteria is warranted. As previously mentioned, non-academic criteria used during applicant interviews vary from institution to institution. [22,24-28] Of those that list the qualities sought among prospective students, there is hardly any consent about what qualities merit inclusion or exclusion from an applicant pool. Various authors cited, among other things, the following: ability, awareness of community/medical/political/social issues, caring qualities, certainty of career choice, communication, compatibility with the school's study styles, encouraging behavior, friendliness, individual achievement, interest in medicine, intrapersonal skills, involvement in school and/or community activities, levels of maturity, maturity, motivation, nonacademic performance, overall judgment, perseverance, self-confidence, supportive behavior, and tolerance. [18-21] Shaw et al. evaluated twenty non-cognitive, non-teachable traits, such as being honest, energetic, confidence-inspiring, and conscientious. [28] Norwacek et al. chose to rate communication and interpersonal skills, commitment to serve others, familiarity with issues in medicine, leadership ability, motivation for medicine, and overall impression. [22]

Unfortunately, the most conventional screening tools rely on variations of self-report to assess character. While commonly utilized, self-report has a potential for social desirability bias, which is a tendency to answer questions such that others view the responses favorably. This is often described as an over-reporting of good behavior and an underreporting of bad behavior. To further complicate the difficulties in assessing character during an interview, many venues offer services that educate prospective medical students/professionals on how they ought to portray themselves: online forums, purchased literature, or even personal instruction.

Acceptance committees must evaluate the non-academic qualities of a candidate based upon a snapshot of their personality. Although this brief encounter can reveal much about motivation, perseverance, leadership, self-confidence, and any one of a dozen other virtues, may these same virtues be coached for display in the setting of one- or two-hour interview(s)? If, as Puryear and Lewis indicated, the interview is the most significant component of the admittance process, might committees be placing too much stock in a portion of the interview that is amiable to misrepresentation? Coached responses that do not reflect the true nature of an applicant's character are forms of dishonesty (particularly under the guise of social desirability bias). But in this high-stakes proposition, what student wouldn't want to put his/her best foot forward? Every student, coached or not, understands the value in portraying himself/herself well: empathetic rather than wanton, worthy rather than entitled, self-confident rather than deprecating. Unfortunately the manner in which interviews are arranged may encourage vice. Literature, indeed, has demonstrated that some types of interviews foster environments in which impression management is used, which others provide a more unfavorable environment. [15,17]

In 2001, McMaster University began its preliminary research in what became known as multiple mini interviews (MMIs). [29] Although initially performed on a small pilot sample, their compelling research demonstrated that MMIs were preferable to traditional interviews in that post-interview scores more accurately reflected future clinical performance, [29-30] patient communication, [30-31] and professionalism.[32] MMIs were not only found to correlate with the

qualitative aspects of an interviewee, but also with the hard endpoint of achieving national licensure.[31,33] Since its preliminary data demonstrated better overall test reliability [29] as well as better predictive value of future performance, many institutions have implemented MMIs in place of traditional interviews.

For every institution, regardless of what method they choose to employ during interviews, significant time and resources are allocated to the interview process. This represents, arguably, the most expensive portion of any admissions component. The value of an interview lies in its inherent ability to produce something of value that is unobtainable by other means, the non-academic components of every viable candidate. It also demonstrates the profound importance of personal interaction. Although there is value in treating the admissions process in an analytical manner, there is still a stronger sentiment of humanness that is to be found only in real interaction, particularly because the physician-patient relationship is at its core so powerfully human. This parallels the personal interactions that prospective physicians will have with colleagues and patients. But perhaps this is even more reason to value honest responses rather than those that are contrived. Medicine is interested in physicians who can be real with their associates and true to their patients. Therefore, the challenge still remains: how can authentic responses to interview questions or hypothetical situations be teased from those the non-spontaneous, manufactured responses?

c. Hypothesis/Research question

Do allopathic medical school candidates engage in social desirability in multiple mini interviews while they present themselves for qualitative assessment? We expect to find that one of the two components of social desirability bias, that being impression management, is utilized by potential allopathic medical school matriculates, as demonstrated by their quantitative scores provided by the BIDR Version 6- Form 40A.

d. Goals for the study

We hope to establish the presence or absence of social desirability bias among allopathic medical school applicants interviewing at the University of Arizona College of Medicine-Phoenix using the MMI format and, if present, will quantify the extent to which social desirability bias exists within the constructs of the simplified impression management and self-deceptive enhancement research model. We also intend to contrast our means with those of the BIDR version 6.

Research Materials and Methods

Potential subjects were interviewing candidates for the University for the University of Arizona College of Medicine - Phoenix's entering class of 2018. They were selected by the admissions committee on the basis of various criteria including collegiate performance, MCAT scores, extracurricular activities, letters of reference, personal statements, and responses to essay questions. Prior to the onset of the MMIs, candidates were briefly instructed in regards to the University of Arizona College of Medicine - Phoenix's scholarly project program.

While describing the program and emphasizing the variety of projects that can be performed, applicants were informed of their opportunity to participate in a scholarly project that involved investigating the interviewing process itself. This participation would occur shortly after the completion of the MMIs during a 10 minute break period, wherein each applicant would be otherwise decompressing from the interviewing experience. Each applicant was informed that the inventory offered to them would involve 40 questions that would require them to quantify the extent to which they agreed with a particular statement. They would rate their responses from 1 to 7 with a sample statement and Likert scale provided as follows:

"When I am angry, I sometimes do things I regret."

1- not true

4- somewhat

7- very true

We emphasized the applicant's choice to either participate or to enjoy their break. The BIDR inventory contains no personal identifiers and there is no way to identify who the respondent is or is not. Their choice would have no bearing whatsoever on his/her status as a medical school applicant. Potential subjects were be told that the inventory takes anywhere from 5-7 minutes

to complete. Even if an applicant cannot complete the inventory in the allotted time, they were instructed to turn in their inventory.

Each response was scored using the dichotomous scoring method, wherein the Likert scale would be reversed for even questions in the first half and odd questions in the second half. Then, one point would be given for Likert responses rated either a six or a seven. Although some authors advocate for continuous scoring methods, citing higher Cronbach's alphas and higher convergent correlations with other methods that measure social desirability, [34] we elected to use the dichotomous scoring method as this tends to identify more overt social desirability bias. [7] The scoring method reverses the Likert scale in the following manner:

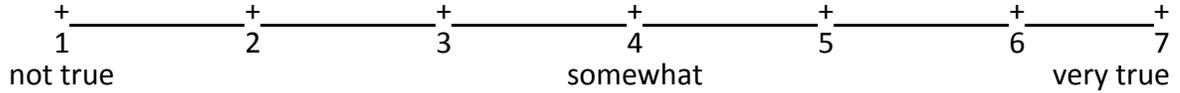**Self-Deceptive Enhancement (SDE)**: Items 1 - 20
Reverse scored items: 2,4,6,8,10,12,14,16,18,20.

Impression Management (IM): Items 21 - 40
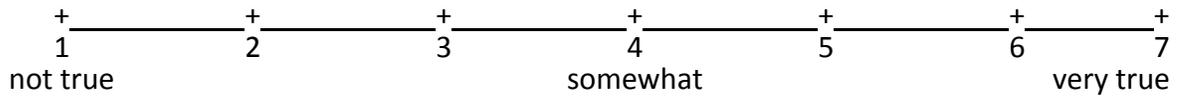Reverse scored items: 21,23,25,27,29,31,33,35,37,39.

BIDR Version 6 - Form 40A

Using the scale below as a guide, write a number beside each statement to indicate how true it is.

```
 +_____+_____+_____+_____+_____+_____+
 1          2          3          4          5          6          7
not true                      somewhat                      very true
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_____ 1. My first impressions of people usually turn out to be right.

_____ 2. It would be hard for me to break any of my bad habits.

_____ 3. I don't care to know what other people really think of me.

_____ 4. I have not always been honest with myself.

_____ 5. I always know why I like things.

_____ 6. When my emotions are aroused, it biases my thinking.

_____ 7. Once I've made up my mind, other people can seldom change my opinion.

_____ 8. I am not a safe driver when I exceed the speed limit.

_____ 9. I am fully in control of my own fate.

_____ 10. It's hard for me to shut off a disturbing thought.

_____ 11. I never regret my decisions.

_____ 12. I sometimes lose out on things because I can't make up my mind soon enough.

_____ 13. The reason I vote is because my vote can make a difference.

_____ 14. My parents were not always fair when they punished me.

_____ 15. I am a completely rational person.

_____ 16. I rarely appreciate criticism.

_____ 17. I am very confident of my judgments

_____ 18. I have sometimes doubted my ability as a lover.

_____ 19. It's all right with me if some people happen to dislike me.

_____ 20. I don't always know the reasons why I do the things I do.

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Using the scale below as a guide, write a number beside each statement to indicate how true it is.

```
+_____+_____+_____+_____+_____+_____+
1          2          3          4          5          6          7
not true                     somewhat                      very true
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_____ 21. I sometimes tell lies if I have to.

_____ 22. I never cover up my mistakes.

_____ 23. There have been occasions when I have taken advantage of someone.

_____ 24. I never swear.

_____ 25. I sometimes try to get even rather than forgive and forget.

_____ 26. I always obey laws, even if I'm unlikely to get caught.

_____ 27. I have said something bad about a friend behind his/her back.

_____ 28. When I hear people talking privately, I avoid listening.

_____ 29. I have received too much change from a salesperson without telling him or her.

_____ 30. I always declare everything at customs.

_____ 31. When I was young I sometimes stole things.

_____ 32. I have never dropped litter on the street.

_____ 33. I sometimes drive faster than the speed limit.

_____ 34. I never read sexy books or magazines.

_____ 35. I have done things that I don't tell other people about.

_____ 36. I never take things that don't belong to me.

_____ 37. I have taken sick-leave from work or school even though I wasn't really sick.

_____ 38. I have never damaged a library book or store merchandise without reporting it.

_____ 39. I have some pretty awful habits.

_____ 40. I don't gossip about other people's business.

Results

We received 104 responses, 12 of which were not included in the dichotomous scoring because they were not completed in their entirety. Each individual answer was entered into a Microsoft Excel spreadsheet and referenced twice to ensure accurate recordings. Then, according to the dichotomous method previously mentioned, even Likert responses in the self-deceptive enhancement section and odd Likert responses in the impression management section were reversed. Scores of a "6" or "7" merited one point and points were tabulated separated to assess for self-deceptive enhancement and for impression management.

Our findings from 92 allopathic medical school applicant respondents indicated that our average interviewing medical school applicant was engaging in impression management above and beyond their age-matched undergraduate counterparts with an average of 7.543/20; however, they were not engaging in self-deceptive enhancement with an average of 6.27/20.

Figure 2 UACOM - Phx Data	
Social Desirability Subtypes	Average Applicant Scores
Impression Management	7.543/20
Self-Deceptive Enhancement	6.27/20

Results obtained from our administration of the BIDR version 6- form 40A to 92 applicants who applied to the University of Arizona College of Medicine - Phoenix.

Discussion

According to Paulhus' model, self-deceptive enhancement and denial ought to have a stability that resists influence by situational context. Unconscious process elements would, for example, be operant whether conversing with familiar acquaintances about trivial matters or interviewing with strangers for a competitive internship. And, indeed, this stability was demonstrated by our allopathic medical school applicants. Their average self-deceptive enhancement scores were 6.27/20. This is well-below the 7-point Likert scale BIDR cutoff values for honest responding. In the oft-referenced values, males responding honestly report self-deceptive enhancement at 7.5/20 (3.2) and females at 6.8/20 (3.1); however, males responding with social desirability bias report self-deceptive enhancement at 9.0/20 (3.9) and females at 7.8/20 (3.9). [7]

The conscious process elements of agency management and communion management, on the other hand, operate within motivational contexts. The extent to which one engages in conscious distortion of responses would, therefore, coincide with the perceived benefits of favorable self-presentation. In our allopathic medical school candidate population, the average impression management score was 7.543/20. Males responding honestly report impression management at 4.3/20 (3.1) and females at 4.9/20 (3.2); however, males responding with social desirability bias report impression management at 10.5/20 (4.1) and females at 10.9/20 (4.2). [7]

Figure 3:
BIDR Version 6 Data

Respondent Results	Honest Responses	Social Desirability Bias
Impression Management (Males)	4.3/20	10.5/20
Impression Management (Females)	4.9/20	10.9/20
Self Deceptive Enhancement (Males)	7.5/20	9.0/20
Self Deceptive Enhancement (Females)	6.8/20	7.8/20

Paulhus' BIDR version 6 data from 1994 regarding the average scores of honest responders and those of responders employing social desirability bias.

What, then, does this mean? Our allopathic applicants neither told the truth, nor did they overtly misrepresent themselves and engage in the conscious aspects of egoistic or moralistic bias. Should one ascribe to the notion that honesty has only virtues without vices, then perhaps these statistics ought to be alarming. However, as social creatures, the vast majority of mankind sees some semblance of virtue in dishonesty; else, why would anyone place their best foot forward when attempt to create a favorable first impression with their new school teachers, future in-laws, or potential employers. Rather than finding danger in this increased use of impression management tactics, it likely reflects the hazard posed by each applicant's situational environment. This can be stated with some credibility, as this effect has been demonstrated by others who observe how candidates/applicants behave within the context of a competitive interview. [15-19]

This single institution use of the BIDR Version 6- Form 40A yielded results that seem consistent with the notion that social desirability (and particularly impression management tactics) has a more prominent role in situations that have significant social prominence. The competitive atmosphere engendered by allopathic medical school interviews would certainly represent such a situation among students whose extensive efforts preparing themselves for admission hinged on this one crucial impression. MMIs rather than traditional interviews were employed not only to obtain a more accurate assessment of the qualitative aspects of our candidates,[29] but also to better predict subsequent clinical performance, professionalism, and communication skills. [30-33] Our admissions team proudly utilizes this tool as a best practice, evidence-based standard. Nevertheless, the use of MMIs is not without our acknowledgment that multiple, brief interactions still have potential for bias, as these interactions rely on self-report. Indeed, our findings indicate that there is a conscious manipulation of the positive aspects of our average candidate's impression shortly after the completion of their interviews. Thus, in our attempts to improve the interview experience and continue evidence-based practice, we can confirm the presence of increased impression management tactics shortly after the completions of MMIs for allopathic medical school admittance.

How, then, do we intend to reduce the extent to which dishonesty occurs in the MMI context? Several studies investigated the contextual components of IM, concentrating on behavioral description interviews and/or situation interviews. Nearly all demonstrated the use of different impression management techniques, which varied somewhat according to which interview method was employed. Responses to experience-based questions tended to elicit a self-promotion or self-focused IM tactic, while situational questions elicited ingratiation or other-focused IM tactics. [15,17-19,35] These findings suggest that structured interviews don't necessarily minimize IM behavior, but merely direct some IM tactics at the expense of others.

Some would advocate for a morally-questionable approach akin to the bogus pipeline, which was championed by its creator Dr. Harold Sigall in 1967 to reduce false responses in a self-report setting, particularly in regards to emotional or affective questions. [36] In this method,

candidates are told that their responses are being monitored by a polygraph (lie detector), even though the electrodes and conducting wires are fake and will render the apparatus inert. The suggestion that a discrepancy could be demonstrably measured has the effect of motivating respondents to answer truthfully. [37] While this method obviously is fraught with ethical issues, it provides valuable information in that the mere suggestion of demonstrable techniques used to ascertain incongruence in attitude will trend responses towards honest responses. Therefore, the suggestion that one is, for example, trained in social psychology would likely have the same effect. Better yet, using a social psychologist as one of several interviewers in the MMI process would achieve the same effect without introducing dishonesty on the part of the interviewer.

Group think strategies might also be used to engender an atmosphere of honesty. This, too, has the potential for both ethical propriety and impropriety as was noted years ago by he who first coined the term, William H. Whyte Jr. Said he, "We are not talking about mere instinctive conformity- it is, after all, a perennial failing of mankind. What we are talking about is a rationalized conformity - an open, articulate philosophy which holds that group values are not only expedient but right and good as well." [38] In this vein, several participants in each applicant pool could be planted to admit that they weren't entirely honest at some point in the application process, perhaps overemphasizing their roles in undergraduate research or their involvement in extracurricular activities. These comments would be further endorsed by another, who would then set the precedent for self-scrutiny and honesty.

Yet another proposed method involves asking candidates about their familiarity with facts or events that are contrived. Any pretense of familiarity with a fictitious event would be considered distortion. [39-40]

Future Directions

In the future, it would be prudent to reassess the extent to which allopathic medical school candidates engage IM by administering another self-report inventory such as the Marlowe-Crowne Social Desirability Scale or Martin-Larsen Approval Motivation-score. Or perhaps IM could be measured using coders to assess the frequency of IM tactics via video and audio surveillance. Coding is, however, fraught with inherent challenges such as ascribing multiple behaviors to obscure, catch-all labels, which make comparisons between coders and studies difficult. Levashina and Campion have recently provided a model of faking within the context of an employment interview known as the Interview Faking Behavior (IFB) scale. [41] Their definition of faking involves impression management and includes the broad concepts of "pretense, concealment, exaggeration, and so forth." The use of their IFB scale in an allopathic medical school MMI setting could provide a useful insight into the use of impression management tactics.

Future research might also be redirected to examine interviewer variables rather than interviewee, focusing on individuality's effect on one's perception of impression management. [42] Perhaps interviewers also engage in IM and, thereby, unintentionally encourage the extent to which applicants engage in IM; [16] after all, interviewees found perceived moral equivalence and fairness in their use when interviewers also used IM tactics. [43]

Considering the extent to which allopathic medical school programs historically relied on the interview for the eventual acceptance or rejection of candidates, [21] it would be wise to survey allopathic admissions teams to ascertain their reliance on interviews at present. It would also be useful to obtain some brief demographic information from those who elect to complete the Balanced Inventory of Desirable Responding, as both age [10] and gender [3,11] seem to affect both self-deceptive enhancement and impression management scores.

Conclusions

The University of Arizona College of Medicine- Phoenix's average applicant impression management score is neither surprising nor particularly nefarious considering the high-stakes, competitive interview setting. While it may superficially seem concerning, various studies aimed at positive response distortion have concluded that positive distortion has negligible impact upon the predictive validity of personality testing [44-45]. Simply stated, faking has empirically been uncorrelated with job performance and attempts to adjust for faking fail to increase, appreciably, the predictive validity of personality test scores.

Still, the confounding nature of social desirability bias cannot be understated in any attempts to ascertain true, unfiltered responses, particularly in situations where an individual's personality and character are being scrutinized. This being said, the traditional one-on-one interviews employed by many institutions ought to consider minimizing social desirability bias by employing indirect questioning rather than direct questioning [46]. This would involve asking an applicant to project his or her value on another who was in a particular situational context.

In conclusion, our single institution use of the BIDR Version 6 yielded results that demonstrate an increased use of impression management tactics when compared to BIDR reference groups among allopathic medical students shortly after the completion of multiple mini interviews. Our results are consistent with Paulhus' model of social desirability bias in that allopathic medical school applicants engaged in conscious impression management tactics while simultaneously refraining from an increased use of subconscious self-deceptive enhancement tactics. While it is clear that allopathic candidates were likely aware of their dishonesty, what is not clear is what influences encouraged them to engage in impression management tactics above and beyond their BIDR reference peers. Our MMI format, which we proudly employ, is the best evidence-based method we have in terms of the interview experience, but it is apparent that the interview process still has potential for growth and improvement. Knowing that our MMI format doesn't necessarily ameliorate vice in the form of impression

management tactics, we will seek out methods that minimize impression management in the future to better ascertain the character and non-cognitive attributes of our potential matriculates. We understand that further research is needed to both confirm and validate our findings and proudly join with the voices of others in inviting our work to be replicated and improved upon.

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