Love the way you lie: Hiring managers' impression management in company presentation

videos

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ABSTRACT

In case of an applicant shortage, signaling theory and research on interviewer impression management (IM) imply that hiring managers use more IM. To test which kind of IM behavior they apply and whether it indeed influences applicants, participants fulfilled the role of hiring managers and recorded company presentation videos, either assuming an applicant shortage or a sufficient number of applicants. In the applicant shortage condition, participants used more defensive IM, indicated by self-reported, observed, and artifactual (withholding negative visual information about an organization) IM measures. Additionally, more defensive IM led to better perceived organizational attractiveness. This study contributes to IM research shedding light on hiring managers' IM behavior and stimulating ideas on how to study IM behavior in the laboratory.

Keywords: impression management; recruiter; interviewer; company presentation videos; applicant shortage; applicant reactions

Hiring managers fulfill various jobs in selection processes (Posthuma, Morgeson, & Campion, 2002). In the pre-application phase, they engage in recruitment activities to motivate applications. When applicants decided to apply, hiring managers try to select suitable applicants by, for instance, acting as interviewers in job interviews. In this post-application phase, recruitment activities are still crucial in retaining applicants and increasing the likelihood that they accept job offers (Highhouse, Lievens, & Sinar, 2003). An increasingly common recruitment activity in this phase are company presentation videos where hiring managers present themselves and the organization to applicants (Brenner, 2016). Such videos are particularly common before digital interviews (interviews where applicants answer to questions by sending videos to the organization; Langer, König, & Krause, 2017) to enhance candidate experience and to inform applicants about who will evaluate their responses (Brenner, 2016).

Because hiring managers possess different information than applicants (e.g., about negative characteristics of the organization), signaling theory (Bangerter, Roulin, & König, 2012; Spence, 1973), research on organizational impression management (IM) (Bolino, Kacmar, Turnley, & Gilstrap, 2008), and research on interviewee and interviewer IM (Wilhelmy, Kleinmann, König, Melchers, & Truxillo, 2016) imply that hiring managers likely engage in IM behavior. Moreover, it is a widespread but untested assumption that organizational contexts can impact hiring managers' behavior (Klehe, 2004). In other words, the extent of IM and IM strategies could depend on organizations' circumstances. Especially in an applicant shortage (Rynes & Barber, 1990), hiring managers might try harder to retain applicants. Accordingly, they could exaggerate positive aspects of the organization while simultaneously understating negative ones (Levashina & Campion, 2007). Therefore, the first

goal of the current experiment was to clarify if an applicant shortage can impact hiring managers' IM behavior and whether this affects applicants' perceptions of the organization.

The second focus of this study was to contribute to the methodology of measuring IM. IM behavior is generally evaluated via self-report (Roulin & Bourdage, 2017). However, this is not without limitations (see Doliński, 2018; Podsakoff & Organ, 1986). For instance, participants commonly report their IM behavior in hindsight which might lead to misconceptions about actual IM behavior (Hawkins & Hastie, 1990; Podsakoff & Organ, 1986). Furthermore, participants may answer in a socially desirable way, especially when they anticipate potential negative consequences (cf., Booth-Kewley, Edwards, & Rosenfeld, 1992). Ironically, participants might also apply IM behavior in IM questionnaires (Pauls & Crost, 2004). For example, they could understate their use of ingratiation (a certain IM strategy) which itself would represent IM behavior.

One possible solution for the aforementioned issues is the use of observer ratings (Peeters & Lievens, 2006). Yet, observers may not be a good source for assessing IM behavior (Roulin, Bangerter, & Levashina, 2015). However, if observers knew which information participants can offer, they would potentially be better able to evaluate participants' IM behavior. Consequently, the second goal of the current study was to design a new way of capturing IM behavior. We therefore used the findings of previous research on organizational, interviewee and interviewer IM (Levashina & Campion, 2006; Mohamed, Gardner, & Paolillo, 1999; Roulin & Bourdage, 2016; Wilhelmy et al., 2016) to develop and test a laboratory paradigm to assess observer ratings of IM and measures for artifactual IM. These novel methods of assessing IM behavior might be useful for future research on IM in various contexts.

Background and Hypotheses Development

Signaling Theory

When two parties possess unequal information, signaling theory (Bangerter et al., 2012; Spence, 1973) offers a theoretical background to understand the parties' behavior. According to signaling theory, senders of the signal can select which information they offer to receivers, and how they provide this information (Connelly, Certo, Ireland, & Reutzel, 2011). During personnel selection, hiring managers and applicants possess very different information and they can both determine how to present them to the respective other party. Applicants want to signal their suitability for the job; as such, they present themselves in the best possible light, whereas hiring managers want to retain applicants in the applicant pool; as such they might decide to conceal negative information about an organization and exaggerate positive ones (Bolino et al., 2008; Mohamed et al., 1999).

In the words of the signaling theory, applicants and hiring managers play a "signaling game" (Bangerter et al., 2012, p. 719) in which they select pieces of information they deliberately present to the other party to evoke a desired image. Evidently, this behavior also represents impression management which is defined as the "attempt to control images that are projected in real or imagined social interactions" (Schlenker 1980, p. 6).

Hiring Managers' IM

The phenomenon of IM is well-established in selection research (e.g., Peck & Levashina, 2017). However, research has predominantly covered applicants' IM behavior, and, despite existing taxonomies indicating that organizations also use IM (Mohamed et al., 1999), research has just recently acknowledged that organizations and their representatives (e.g., interviewer) also engage in IM behavior (Wilhelmy, Kleinmann, Melchers, & Götz, 2017). In the following section, we discuss how interviewees', organizational, and interviewers' IM strategies are tied to hiring managers' potential IM strategies.

Interviewee IM is commonly categorized into assertive and defensive (Levashina & Campion, 2007; but see Bolino et al. 2008 for an overview of alternative categorizations of

IM behavior). Assertive interviewee IM attempts to increase the positive image of the interviewee (e.g., by exaggerating positive attributes), whereas defensive interviewee IM tries to downplay or conceal interviewees' negative attributes (Levashina & Campion, 2006; Roulin & Bourdage, 2016, 2017).

This kind of IM behavior is not necessarily restricted to interviewees as hiring managers might apply similar behavior. In fact, hiring managers aim at enhancing applicants' perceptions of organizations (i.e, organizational IM; Bolino & Turnley, 1999). Mohamed et al. (1999) categorized organizational IM into direct, indirect, assertive and defensive IM behavior. Direct IM behavior intends to present information about an organization, whereas indirect IM manages the organizational image through, for instance, associations with institutions that reflect positively on the organization (e.g., welfare organizations; Bolino 2008). Direct and indirect organizational IM can, similar to interviewee IM, be assertive and defensive. However, instead of mainly focusing on information about themselves, hiring managers likely also present information about the organization to achieve recruitment goals (Mohamed et al., 1999). For assertive IM, hiring managers can exaggerate or invent positive attributes of the organization or associations to prestigious institutions (Mohamed et al., 1999; cf., Roulin & Bourdage, 2016). For defensive IM, hiring managers may attempt to find excuses for negative aspects of the organization or hide associations with institutions that would reflect negatively on the organization (cf., Elsbach, Sutton, & Principe, 1998).

One possible role of hiring managers is to act as an interviewer in job interviews (Posthuma et al., 2002). Therefore, we consulted research on interviewer IM to generate further ideas about hiring managers' IM behavior. Wilhelmy and colleagues (2016) argued that interviewers use verbal and nonverbal IM. Verbal IM is similar to the aforementioned aspects of assertive and defensive IM; it consists of presenting information about oneself or the organization so applicants perceive hiring managers as more competent or organizations

as more attractive. Nonverbal IM consists of intentionally smiling (suppressing smiles) or nodding (suppressing nods) at the interviewee to increase (decrease) rapport building during interviews. Additionally, interviewers use artifactual IM (i.e., displaying visual information; Wilhelmy et al., 2016). This can be done more or less conspicuously (e.g., applicants' resume on the table; organizations' achievements in the background) but has similar intentions as other forms of IM: to present oneself or the organization in a desired light (Bolino et al., 2008).

Similar to interviewee and organizational IM, interviewer IM can be useful to classify hiring managers' IM, because they might apply comparable behavior. They may use verbal IM through being enthusiastic about an organization. Furthermore, they could apply nonverbal IM by intentionally smiling at applicants. In addition, they could use artifactual IM such as showing diagrams of the companies' rising profits.

In sum, interviewee, organizational, and interviewer IM encompass different IM strategies that hiring managers may apply to influence applicants' perceptions of organizations. However, as of yet it is unclear which kind of IM behavior they prefer in order to achieve desired goals. Additionally, the extent of hiring managers' IM may vary substantially depending on organizational circumstance (Turban & Cable, 2003).

Factors Influencing IM Behavior

One of the most important aspects for personnel selection processes is the size of the applicant pool (Klehe, 2004). For instance, it determines which personnel selection procedures to use, the amount of suitable applicants, and if organizations need to improve recruitment (cf., Klehe, 2004). Therefore, it could impact the way hiring managers behave in order to affect perceptions of an organization (Turban & Cable, 2003).

In an applicant shortage, hiring managers might aim at increasing organizational attractiveness for retaining available applicants. Wilhelmy and colleagues' (2016) results

support this assumption showing that in order to increase organizational attractiveness and enforce job offer acceptance, interviewers use IM behavior. In our case, hiring managers may use assertive IM if they highlight positive aspects of the organization, adopt positive nonverbal behavior, and show positive visual information about the organization. Furthermore, in attempting to keep applicants' image of the organization positive, hiring managers presumably apply defensive IM behavior like withholding or re-framing negative information (Wilhelmy et al., 2016). Thus we propose,

Hypothesis 1a. Participants in the applicant shortage condition will report more assertive and defensive IM behavior.

Previous research on IM relied on self-report measures with its potential downsides (see Podsakoff & Organ, 1986) while former attempts to overcome these downsides by capturing IM with observer ratings did not provide promising results (Roulin et al., 2015). We therefore introduce a new methodology to obtain informative observer ratings for IM in laboratory settings. Within the paradigm of our study, observers get the same information as participants. This way, we enable observers to more objectively assess how often participants mentioned or exaggerated positive information (i.e., assertive IM behavior) and disguised or withheld negative information (i.e., defensive IM behavior). In order to examine the usefulness of our new methodology to capture IM behavior we propose:

Hypothesis 1b. Observational data (i.e., captured by observers who rate verbal, nonverbal, artifactual, assertive, and defensive IM) will reveal that participants in the applicant shortage condition used more IM behavior.

Outcomes of IM Behavior

In an applicant shortage, hiring managers should use assertive and defensive IM to enhance applicants' perceptions of the organization, retain applicants, and increase job offer acceptance. IM could be a promising strategy for these goals as organizational, interviewee,

and interviewer IM research has predominantly supported that IM behavior positively influences desirable outcomes (Peck & Levashina, 2017). Elsbach and colleagues (1998) showed that organizational IM decreased the number of customers' complaints, interviewee IM enhances interview performance ratings (Buehl & Melchers, 2017), and interviewer IM boosts organizational attractiveness (Wilhelmy et al., 2017).

Hiring managers' IM may aim for similar outcomes. Following findings by organizational IM and comparable to interviewees intending to be perceived as competent (cf., Peck & Levashina, 2017), or interviewers who want to signal professionality (cf., Wilhelmy et al., 2016), hiring managers also want to be perceived as likeable and professional and want to improve applicants' perceptions of the organization (Bolino et al., 2008). This means, hiring managers' IM could enhance applicants' evaluations of hiring managers' professionality and social competence, and might be useful to improve applicants' perceptions of an organization. Therefore, we propose:

Hypothesis 2. Participants' self-reported and observed IM behavior will mediate the positive relationship between the applicant shortage condition and evaluations of professionality and social competence.

Hypothesis 3. Participants' self-reported and observed IM behavior will mediate the positive relationship between the applicant shortage condition and perceived organizational attractiveness.[1]

Method

Sample

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[1] To support open science (Open Science Collaboration, 2015), this study was preregistered. Initially, we assumed that the mediators will be social competence and professionality, but there was more rationale for IM behaviors as mediator. Furthermore, a measure for hiring managers' credibility was excluded because of non-acceptable ICCs.

To determine possible effect sizes between the conditions, we consulted Van Iddekinge, Raymark, and Roth (2005). They instructed participants to act like an applicant/to be honest in an interview and found moderate differences in interviewee IM. Therefore, we expected moderate effect sizes between the conditions for IM behavior. For the expected relation between hiring managers' IM and outcomes (e.g., social competence), we incorporated results of Wilhelmy and colleagues (2017) on interviewer IM, Higgins, Judge and Ferris' (2003) meta-analysis on the impact of influence tactics in organizational contexts, and Peck and Levashina's (2017) meta-analysis on interviewee IM. The literature suggests that IM affects different outcomes (e.g., interview and job performance) weakly to moderately.

Consequently, Fritz and MacKinnon (2007) proposed that $N = 71$ participants are necessary in a mediation model with assumed moderate effect sizes on the alpha and beta path (i.e. standardized regression weights of .39) and for a power of $1 - \beta = .80$. Due to problems that are common with experiments including videotaping (e.g., technical problems), we continued data collection until we gathered data from 80 participants. We excluded one participant who indicated not to use their data. Our final sample consisted of $N = 79$ participants (56% female) with a mean age of 27.63 ($SD = 11.60$) in the applicant shortage and 26.15 years ($SD = 10.07$) in the control condition. All but two participants had an academic background, 45 studied psychology (22 in the applicant shortage condition), 10 had a business background (5 in the applicant shortage condition), and the remaining participants had diverse backgrounds (e.g., sports, administration).

Design and Procedure

Participants should imagine being a hiring manager of an organization searching for applicants. They were instructed to record a video introducing a job and organization to applicants who will see this video in the first step of their selection process. Participants were

randomly assigned to either the applicant shortage or control condition. Afterwards, they read the experimental manipulation (see Table 1 in Electronic Supplementary Material [ESM] 1) and the information about the organization. For artifactual IM, participants received four diagrams (see Figure 1in ESM 2), which they could show during the video. After familiarizing with the material and preparing for the video, participants were told that they would record a three to six minute length video. In the recordings, participants had to sit at a table; they could keep the organization and job information on the table and read from them. Following the recording, participants filled out questionnaires containing all relevant measures.

Two trained raters independently watched the videos in random order. Rater 1 evaluated perceived organizational attractiveness, participants' professionality, and social competence. This rater was unaware of the organization and job information. Rater 2 evaluated participants' verbal and nonverbal IM behavior. Furthermore, this rater was given the organization and job information to assess if participants brought up, exaggerated, or distorted the information available in the organization and job description. This rater also kept track of participants' use of diagrams.

Measures

Dependent and mediator variables

All items except for **observed assertive, defensive, and artifactual IM** were rated from 1 (*does not apply at all*) to 5 (*entirely applies*) (items can be found in Table 2-4 in ESM 1).

Self-reported IM behavior was measured with 16 items. Assertive and defensive IM behaviors were each represented by eight items adapted from Levashina and Campion (2007) and Roulin and Bourdage (2017). These sources both offer a range of possible IM behaviors and a classification of IM behavior into assertive and defensive (see also Mohamed et al.,

1999). The process of item development was as follows: We analyzed the items of the aforementioned sources, decided which one might apply in the context of a company presentation video, and adapted the items so they would fit to the context of the current study (e.g., "I talked mainly about my strengths to mask my weaknesses" from Levashina and Campion now is "I talked mainly about strengths of the company to mask weaknesses"). Then, two authors of this study independently translated the items to German. Afterwards, the authors compared their respective translations, discussed differences in wording, developed a joint translation and checked if those translated items still reflect the respective assertive or defensive IM behavior they were intended to measure (cf., Douglas & Craig, 2007).

Verbal and nonverbal IM were measured with six items (three each). These items were generated based on Wilhelmy and colleagues' (2016) findings.

For **observed assertive and defensive IM behavior,** the authors independently categorized the organization and job information into positive and negative information. Afterwards, we discussed the categories and re-categorized the information when necessary. Then, we developed 22 items matching the information from the organization and job description. Finally, 10 items for assertive IM behavior and 12 for defensive IM evolved. The raters received a scale with three options: 0 (did not mention), 1 (mentioned partially), 2 (completely mentioned). For positive information, a higher number indicates more assertive IM behavior. For negative information, a lower number represents defensive IM behavior as participants concealed or avoided negative information. To improve clarity, we recoded the ratings for negative information so higher values indicate more defensive IM behavior. However, three answer options do not cover all possible tactics that participants might apply as hiring managers might exaggerate information or illustrate negative information in a positive way (see Roulin & Bourdage, 2016; Wilhelmy et al., 2017). As such, we added a fourth answer option for positive (information was exaggerated) and negative information

(displayed negative information in a positive way) respectively. These options were treated as additional indicators for observed assertive and defensive IM respectively, and we assessed the frequency of these behaviors.

For **observed artifactual IM behavior** raters were instructed to code if participants used the provided diagrams.

Hiring managers' **social competence and professionality** were measured with seven and eight items; these items were taken from Kanning and Heilen (2016).

Perceived organizational attractiveness was measured with ten items. These items were taken from Highhouse, Lievens and Sinar (2003) and Warszta (2012). They should reflect how positively the raters perceived the organization after watching the video of a participant introducing the organization.

Interrater Reliability

Two additional trained raters independently assessed the dependent variables. These raters watched the videos in a different random order compared to the initial raters. Rater 3 assessed perceived organizational attractiveness, participants' professionality, and social competence and was unaware of the organization and job information. Rater 4 received the organization and job information and assessed observed assertive, defensive, and artifactual IM as well as verbal and nonverbal IM. Results for the intraclass correlations as indicators for interrater reliability are presented in Table 5.

Results

Testing the Hypotheses

Table 5 presents correlations and reliabilities of all measured variables and Table 6 shows results for independent *t*-tests together with resulting effect sizes and confidence intervals. For the observed measures, we calculated the average of the ratings of the respective two raters and used these average ratings for the analyses. Participants reported

moderately more IM behavior in the applicant shortage condition. For a post-hoc evaluation of potential differing effects for self-reported assertive and defensive IM, we compared the respective results with a Bonferroni-corrected α-level of .025. The difference in defensive IM behavior was significant, whereas the difference in assertive IM behavior was not. Therefore, Hypothesis 1a was partially supported.

Additionally, we assessed if participants in the applicant shortage condition would express more IM behavior (verbal, nonverbal, artifactual, assertive, defensive IM). There were no differences between the experimental groups for observed verbal, nonverbal, and assertive IM, but there was a moderate effect for observed defensive IM (Table 6). Additionally, we counted how often each participant exaggerated positive aspects and displayed negative aspects positively. Afterwards, we counted how many participants applied these strategies at least once, calculated χ^2-tests, and compared the results to a Bonferroni-corrected α-level of .025. The groups did not differ in exaggerating positive aspects (applicant shortage = 16 participants, control group = 12), $\chi^2(1) = 0.73$, $p = .39$, and in displaying negative aspects positively (applicant shortage = 15 participants, control group = 12) $\chi^2(1) = 0.40$, $p = .53$.

For artifactual IM, we counted how many participants in the respective groups showed at least one of the provided diagrams indicating assertive and defensive IM, and calculated χ^2-tests. The groups did not differ in showing the diagrams indicating assertive IM (applicant shortage = 25 participants, control group = 29), $\chi^2(1) = 1.28$, $p = .26$. However, they differed in defensive artifactual IM such that participants in the applicant shortage group tended to withhold the respective diagrams (applicant shortage = 6 participants, control group = 14), $\chi^2(1) = 4.56$, $p < .05$. To summarize, the effects of verbal, nonverbal, artifactual, assertive, and observer-rated defensive IM partially support Hypothesis 1b and converge with

the results for self-reported IM. Participants in the applicant shortage group used defensive IM strategies more extensively than the control group.

Hypothesis 2 proposed that participants' self-reported and observed IM behavior will mediate the positive relationship between the applicant shortage condition and evaluations of professionality and social competence. We used PROCESS (Hayes, 2013) for analyses of two models. The first one included self-report measures, the second one observed measures of IM as mediators in an attempt to show that results are independent from the measurement method. Professionality and social competence were used as outcomes in two separate analyses for the respective models. Results indicate no mediation for these analyses.[2] Consequently, Hypothesis 2 was not supported.

Hypothesis 3 stated that participants IM behavior will mediate the positive relationship between the applicant shortage condition and perceived organizational attractiveness. Again, we used PROCESS (Hayes, 2013) for one model including self-report IM measures, and one including observed IM measures. Table 7 and 8 show that there was a significant indirect positive effect of applicant shortage on perceived organizational attractiveness through observed and self-reported defensive IM behavior respectively (see Figures 2 and 3). Consequentially, Hypothesis 3 was partially supported.

Discussion

Applying signaling theory (Bangerter et al., 2012; Spence, 1973), this study ties organizational, interviewee and interviewer IM (Levashina & Campion, 2007; Mohamed et al., 1999; Wilhelmy et al., 2016) to the context of hiring managers' IM and examines its relation to unfavorable recruiting circumstances (i.e., applicant shortage). Moreover, we developed new ways of measuring IM behavior thus introducing a novel methodology for

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[2] To increase readability, we did not include mediation results for Hypothesis 2. They can be made available upon request.

measuring observer ratings of IM in various circumstances. Additionally, this study is the first to examine company presentation videos for recruitment showing that hiring managers' behavior during such videos can impact perceptions of an organization.

First, the current study contributes to IM research introducing a methodology allowing to capture not only self-report data on IM, but also observer ratings for IM behavior. Specifically, by providing our observers and participants with the same information about the organization, we were able to interpret participants' actual behavior as assertive (i.e., highlighting positive aspects of the organization) and defensive (i.e., withholding negative information about the organization) IM behavior. Supporting the quality of the observer ratings, testing of hypotheses showed converging results for self-reported and observed defensive IM. Both ways of measuring defensive IM indicate that participants in the applicant shortage condition used more defensive IM which, for both measures, impacted raters' evaluation of the organization positively.

Moreover, the results of this study indicate that it seems to be possible to distinguish assertive and defensive artifactual IM behavior as participants in the applicant shortage condition tended to withhold diagrams illustrating a challenging future for the organization (e.g., falling predicted profits). This expands Wilhelmy and colleagues' (2016) findings who reported that interviewers use artefacts (e.g., pictures) to manage applicant impressions – likewise, hiring managers deliberately chose to hide artefacts that might reflect negatively on the organization.

The latter finding and the findings regarding self-reported and observed IM behavior suggest that hiring managers in applicant shortage conditions are prone to using defensive IM. These results go beyond previous research on IM (Bolino et al., 2008; Peck & Levashina, 2017) because they show that hiring managers, similar to interviewees and interviewers, apply IM behavior to signal certain attributes of the organization and to achieve desired

outcomes (i.e., retain applicants; Bolino et al., 2008). It is worth mentioning that hiring managers' IM arose in situations void of any direct interpersonal contact. Therefore, the current study is the first to find that IM strategies generated by researchers like Levashina and Campion (2007) can generalize to contexts where there is an asynchronous interaction between the parties of the selection process. This also indicates that defensive IM strategies will not only be applied as a reaction to situations in which the own impression is at stake (e.g., critical questions of an interviewer), but also in an anticipatory attempt to maintain the organization's image (see also Elsbach et al., 1998). In other words, it seems plausible that hiring managers acting as assessors in digital interviews, but also interviewees in asynchronous interactions, withhold or alter negative information so their respective anticipated conversation partner (i.e., potential applicants, interviewers) would have less reason to be critical.

In sum, the results for defensive IM imply that when it comes to negative aspects of the organization, participants in the applicant shortage condition have been afraid to scare off the few available applicants. In contrast, participants in the control condition might have wanted to maintain the interest of only the most viable and interested applicants, even if that meant that perceived organizational attractiveness would suffer from a more realistic job preview (cf., Phillips, 1998). Results support this reasoning, as perceptions of the organization for the control condition diminished because of less defensive IM behavior. This finding supports assumptions of signaling theory and former research implying that IM behavior is not only suitable for interviewees to signal competence (Peck & Levashina, 2017), for interviewers to signal organizational prestige (Wilhelmy et al., 2017), or for organizations to prevent customer complaints (Elsbach et al., 1998), but also for hiring managers in company presentation videos to impact applicants' perceptions of organizational attractiveness.

In contrast to the results for defensive IM, the applicant shortage did not impact other IM behavior as previously suggested by Wilhelmy and colleagues (2016) (verbal and nonverbal IM) and several assertive IM strategies as suggested by Roulin and Bourdage (2016), Levashina and Campion (2007) and Mohamed and colleagues (1999). Regarding assertive IM tactics, this could indicate that both groups did not want to oversell the organization. In fact, participants' self-reported assertive IM behavior resulted in mean values of less than three on a five-point scale which speaks in favor of the aforementioned assumption. Regarding nonverbal IM, both groups might not have had too much motivation to smile or nod frequently, as there was no interaction partner, which could explain the low mean values for nonverbal IM.

Lastly, it should be mentioned that the correlation results indicate that neither self-reported nor observed IM behavior were related to verbal and nonverbal IM. One possible conclusion is that assertive and defensive IM tactics are different from verbal and nonverbal forms of IM. For nonverbal IM, this result is comprehensible as using assertive or defensive IM does not necessarily mean smiling more or less often. However, for verbal IM this result is surprising as one item of this scale was "The hiring manager tried to present the organization in a positive way". Alternatively, this finding could be explained by previous research indicating that assessing IM behavior through observers in a rather subjective way (as it was the case for our measure of verbal IM) is not optimal to investigate IM behavior (Roulin et al., 2015). Instead, it seems to be promising to provide observers with insights into the information that a person has and then examine how often this person uses, alters, or withholds information to convey an intended image.

Limitations

At least three limitations must be discussed. First, interrater reliabilities for the outcome variables (professionality [.55], social competence [.44], and perceived

organizational attractiveness [.58]) were relatively small (even if they were "fair" according to Shrout, 1998), which raises concern about the generalizability of the findings. Specifically, we can be more confident regarding generalizability for results concerning IM because those were consistent even when analyzing the results for both raters individually. The same is true for the effects of self-reported and observed defensive IM on perceived organizational attractiveness. However, differences in perceived organizational attractiveness were only significant for the combined ratings and for the initial raters. Therefore, results regarding the outcome measures should be interpreted cautiously and call for more research. For instance, future work could use a similar approach and let hiring managers' record videos under similar circumstances (i.e., applicant shortage vs. enough applicants). Then the focus of this new study could be that participants rate these videos regarding organizational attractiveness or other outcome measures (e.g., perceived job fit) to replicate our findings for a broader range of potential applicants. Second, participants were no real hiring managers, although most participants should have knowledge of the role of hiring managers based on their profession. Still, results might be different for real hiring managers. Therefore, it would be interesting to see the behavior of actual hiring managers in real personnel selection settings to support the findings of the current study. Third, we categorized the aspects of the organization as positive or negative. Doing so allowed us to interpret participants' behavior as assertive or defensive IM behavior. Possibly, some participants did not evaluate certain aspects as being positive/negative. For instance, some might not have assessed the requirement to learn a foreign language as negative. More precisely, if a participant mentioned this aspect of the job we would have interpreted it as being honest, thus not applying defensive IM, whereas participants might have intended to present this information as a positive aspect of the job, which would imply assertive IM behavior. Nevertheless, at least cases in which participants

displayed negative information in a positive way were captured by our measure of displaying negative aspects positively.

Main Practical Implications

Due to the results of this study, companies who are using company presentation videos (e.g., before digital interviews) can hope that these videos can actually retain applicants and motivate them to accept job offers. However, they also have to be aware that hiring managers' behavior in such videos can influence applicants' perceptions of the organization. Especially if hiring managers possess information about challenges in staffing, they might decide to provide applicants with an overly positive image instead of a realistic job preview. In case of an acute applicant shortage this behavior might be adaptive as it can be a tactic to enhance applicants' perceived organizational attractiveness. However, it could be a small step from using honest IM (e.g., highlighting positive aspects) to deceptive IM (e.g., lying about positive aspects) (Roulin et al., 2015). Additionally, providing applicants with a more realistic job preview might have positive long-term consequences such as reduced turnover (Phillips, 1998).[3] Therefore, organizations should be aware of a possible trade-off of embellishing aspects of an organization and providing a realistic job preview.

Future research

This study opens several avenues for future research. First, we introduced new ways of measuring IM which we hope will advance research and practice on IM. It would be interesting to see if our method of enabling observer ratings of IM can be translated to the context of interviewee IM. We imagine that studies investigating interviewee IM would provide participants with a description of a fictitious applicant. Then, participants are interviewed where they should respond to interview questions as if they are the fictitious

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[3] We thank an anonymous reviewer for this insight.

applicant. In this case, participants and observers have the same information, thus observers can more objectively rate participants' IM behavior. This may provide interesting new insights for IM research which has predominantly questioned the use of observer ratings for IM (e.g., Roulin, Bangerter, & Levashina, 2014). Second, IM on the end of the hiring organization is a burgeoning research area (Bolino et al., 2008), and therefore it would be interesting to learn more about IM strategies that might be used in different phases of the selection process. For instance, in order to attract applicants to apply for a job, it might be more important to use assertive IM tactics, whereas later in the selection process, when applicants start to learn more about the organization, the relevance of defensive IM tactics might increase (Mohamed et al., 1999).

Conclusion

IM research has just recently started to explore new perspectives on IM behavior (Wilhelmy et al., 2016). The current study continues this development showing that hiring managers using asynchronous media to present their messages to applicants are prone to using IM behavior. Additionally, we further extend IM research providing ideas for novel methodologies of measuring IM behavior. The findings of the present study are thus hopefully a starting point for studies using innovative methods to investigate novel IM perspectives, as well as for further research assessing the effects of company presentation videos and IM on the side of the hiring organization.

Electronic Supplementary Material

ESM 1. Tables 1-4. (= ESM1.doc, Experimental manipulation and items.)

ESM 2. Figure 1. (= ESM2.doc, Diagrams to capture artifactual IM.)

References

Bangerter, A., Roulin, N., & König, C. J. (2012). Personnel selection as a signaling game. *Journal of Applied Psychology*, *97*, 719–738. https://doi.org/10.1037/a0026078

Bolino, M. C., Kacmar, K. M., Turnley, W. H., & Gilstrap, J. B. (2008). A multi-level review of impression management motives and behaviors. *Journal of Management*, *34*, 1080–1109. https://doi.org/10.1177/0149206308324325

Bolino, M. C., & Turnley, W. H. (1999). Measuring impression management in organizations: A scale development based on the Jones and Pittman taxonomy. *Organizational Research Methods*, *2*, 187–206. https://doi.org/10.1177/109442819922005

Booth-Kewley, S., Edwards, J. E., & Rosenfeld, P. (1992). Impression management, social desirability, and computer administration of attitude questionnaires: Does the computer make a difference? *Journal of Applied Psychology*, *77*, 562. https://doi.org/10.1037//0021-9010.77.4.562

Brenner, F. S. (2016). Bridging the scientist-practitioner gap: Einflussfaktoren auf die Bewerberakzeptanz bei neuen Technologien am Beispiel zeitversetzter Video-Interviews [Bridging the scientist-practitioner gap: Influences on applicant reactions in novel technologies through the example of asynchronous video-interviews]. In T. Verhoeven (Ed.), *Candidate experience: Ansätze für eine positiv erlebte Arbeitgebermarke im Bewerbungsprozess und darüber hinaus* (pp. 71–89). Wiesbaden, Germany: Springer.

Buehl, A.-K., & Melchers, K. G. (2017). Individual difference variables and the occurrence and effectiveness of faking behavior in interviews. *Frontiers in Psychology*, *8*, 686. https://doi.org/10.3389/fpsyg.2017.00686

Connelly, B. L., Certo, S. T., Ireland, R. D., & Reutzel, C. R. (2011). Signaling theory: A review and assessment. *Journal of Management*, *37*, 39–67. https://doi.org/10.1177/0149206310388419

Doliński, D. (2018). Is psychology still a science of behaviour? *Social Psychological Bulletin*, *13*, e25025. https://doi.org/10.5964/spb.v13i2.25025

Douglas, S. P., & Craig, C. S. (2007). Collaborative and iterative translation: An alternative approach to back translation. *Journal of International Marketing*, *15*, 30–43. https://doi.org/10.1509/jimk.15.1.030

Elsbach, K. D., Sutton, R. I., & Principe, K. E. (1998). Averting expected challenges through anticipatory impression management: A study of hospital billing. *Organization Science*, *9*, 68–86. https://doi.org/10.1287/orsc.9.1.68

Fritz, M. S., & MacKinnon, D. P. (2007). Required sample size to detect the mediated effect. *Psychological Science*, *18*, 233–239. https://doi.org/10.1111/j.1467-9280.2007.01882.x

Hawkins, S. A., & Hastie, R. (1990). Hinsight: Biased judgement of past events after the outcomes are known. *Psychological Bulletin*, *107*, 311–327. https://doi.org/10.1037//0033-2909.107.3.311

Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. New York, NY: Guilford Press.

Higgins, C. A., Judge, T. A., & Ferris, G. R. (2003). Influence tactics and work outcomes: A meta-analysis. *Journal of Organizational Behavior*, *24*, 89–106. https://doi.org/10.1002/job.181

Highhouse, S., Lievens, F., & Sinar, E. F. (2003). Measuring attraction to organizations. *Educational and Psychological Measurement*, *63*, 986–1001. https://doi.org/10.1177/0013164403258403

Kanning, U. P., & Heilen, A. (2016). Seniorität und Geschlecht im Einstellungsinterview: Wie wirken Interviewer/innen auf ihre Bewerber/innen? [Seniority and gender in the job interview: How do interviewers affect their interviewees?]. *Journal of Business and Media Psychology*, *1*, 1–7.

Klehe, U.-C. (2004). Choosing how to choose: Institutional pressures affecting the adoption of personnel selection procedures. *International Journal of Selection and Assessment*, *12*, 327–342. https://doi.org/10.1111/j.0965-075x.2004.00288.x

Langer, M., König, C. J., & Krause, K. (2017). Examining digital interviews for personnel selection: Applicant reactions and interviewer ratings. *International Journal of Selection and Assessment*, *25*, 371–382. https://doi.org/10.1111/ijsa.12191

Levashina, J., & Campion, M. A. (2006). A model of faking likelihood in the employment interview. *International Journal of Selection and Assessment*, *14*, 299–316. https://doi.org/10.1111/j.1468-2389.2006.00353.x

Levashina, J., & Campion, M. A. (2007). Measuring faking in the employment interview: Development and validation of an interview faking behavior scale. *Journal of Applied Psychology*, *92*, 1638–1656. https://doi.org/10.1037/0021-9010.92.6.1638

Mohamed, A. A., Gardner, W. L., & Paolillo, J. G. (1999). A taxonomy of organizational impression management tactics. *Journal of Competitiveness Studies*, *7*, 108–130.

Pauls, C. A., & Crost, N. W. (2004). Effects of faking on self-deception and impression management scales. *Personality and Individual Differences*, *37*, 1137–1151. https://doi.org/10.1016/j.paid.2003.11.018

Peck, J. A., & Levashina, J. (2017). Impression management and interview and job performance ratings: A meta-analysis of research design with tactics in mind. *Frontiers in Psychology*, *8*, 201. https://doi.org/10.3389/fpsyg.2017.00201

Peeters, H., & Lievens, F. (2006). Verbal and nonverbal impression management tactics in behavior description and situational interviews. *International Journal of Selection and Assessment*, *14*, 206–222.

Phillips, J. M. (1998). Effects of realistic job previews on multiple organizational outcomes: A meta-analysis. *Academy of Management Journal*, *41*, 673–690. https://doi.org/10.2307/256964

Podsakoff, P. M., & Organ, D. W. (1986). Self-reports in organizational research: Problems and prospects. *Journal of Management*, *12*, 531–544. https://doi.org/10.1177/014920638601200408

Posthuma, R. A., Morgeson, F. P., & Campion, M. A. (2002). Beyond employment interview validity: A comprehensive narrative review of recent research and trends over time. *Personnel Psychology*, *55*, 1–81. https://doi.org/10.1111/j.1744-6570.2002.tb00103.x

Roulin, N., Bangerter, A., & Levashina, J. (2014). Interviewers' perceptions of impression management in employment interviews. *Journal of Managerial Psychology*, *29*, 141–163. https://doi.org/10.1108/JMP-10-2012-0295

Roulin, N., Bangerter, A., & Levashina, J. (2015). Honest and deceptive impression management in the employment interview: Can it be detected and how does it impact evaluations? *Personnel Psychology*, *68*, 395–444. https://doi.org/10.1111/peps.12079

Roulin, N., & Bourdage, J. S. (2016). Honest and deceptive impression management tactics in interviews: Who uses them and what interview characteristics facilitate them? Presented at the 4th European Network of Selection Researchers Meeting, Amsterdam, The Netherlands.

Roulin, N., & Bourdage, J. S. (2017). Once an impression manager, always an impression manager? Antecedents of honest and deceptive impression management use and

variability across multiple job interviews. *Frontiers in Psychology*, *8*, 29.

https://doi.org/10.3389/fpsyg.2017.00029

Rynes, S. L., & Barber, A. E. (1990). Applicant attraction strategies: An organizational

perspective. *Academy of Management Review*, *15*, 286–310.

https://doi.org/10.2307/258158

Shrout, P. E. (1998). Measurement reliability and agreement in psychiatry, *7*, 301–317.

https://doi.org/10.1177/096228029800700306

Spence, M. (1973). Job market signaling. *Quarterly Journal of Economics*, *87*, 355–374.

https://doi.org/10.2307/1882010

Turban, D. B., & Cable, D. M. (2003). Firm reputation and applicant pool characteristics.

Journal of Organizational Behavior, *24*, 733–751. https://doi.org/10.1002/job.215

Van Iddekinge, C. H., Raymark, P. H., & Roth, P. L. (2005). Assessing personality with a

structured employment interview: Construct-related validity and susceptibility to

response inflation. *Journal of Applied Psychology*, *90*, 536.

https://doi.org/10.1037/0021-9010.90.3.536

Warszta, T. (2012). *Application of Gilliland's model of applicants' reactions to the field of

web-based selection*. [Unpublished dissertation]. Christian-Albrechts Universität Kiel,

Germany. Retrieved from http://macau.uni-

kiel.de/receive/dissertation_diss_00008734

Wilhelmy, A., Kleinmann, M., König, C. J., Melchers, K. G., & Truxillo, D. M. (2016). How

and why do interviewers try to make impressions on applicants? A qualitative study.

Journal of Applied Psychology, *101*, 313–332. https://doi.org/10.1037/apl0000046

Wilhelmy, A., Kleinmann, M., Melchers, K. G., & Götz, M. (2017). Selling and smooth-

talking: Effects of interviewer impression management from a signaling perspective.

Frontiers in Psychology, *8*, 740. https://doi.org/10.3389/fpsyg.2017.00740

Table 5.

Means, Standard Deviations, Cronbach's Alpha and Correlations among Study Variables

Scale	M_{AS} (SD_{AS})	M_{CG} (SD_{CG})	ICC(2,2)	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1. Self-Reported IM	3.42 (0.53)	3.10 (0.68)	-	*.84*										
2. Self-Reported Assertive IM	2.88 (0.77)	2.73 (0.72)	-	.81**	*.83*									
3. Self-Reported Defensive IM	3.96 (0.53)	3.46 (0.89)	-	.83**	.34**	*.81*								
4. Verbal IM	3.77 (0.61)	3.75 (0.50)	.60**	.17	.16	-.11	*.77*							
5. Nonverbal IM	2.66 (0.81)	2.82 (0.74)	.69**	.05	.14	-.05	.53**	*.73*						
6. Observed Assertive IM	2.37 (0.46)	2.43 (0.42)	.95**	.29**	.20	-.28*	.18	.06	*.73*					
7. Observed Defensive IM	2.61 (0.32)	2.33 (0.45)	.97**	.29**	.00	.48**	.11	-.04	-.31*	*.78*				
8. Professionality	3.85 (0.69)	3.79 (0.51)	.55**	-.13	-.16	-.05	.37**	.23*	-.10	.08	*.93*			
9. Social Competence	3.76 (0.36)	3.81 (0.33)	.44**	-.13	-.14	-.08	.43**	.39**	.16	-.14	.46**	*.77*		
10. Perceived Organizational Attractiveness	3.46 (0.59)	3.24 (0.56)	.58**	.32**	.09	.43**	.55**	.34**	.21	.42**	.45**	.51**	*.95*	
11. Applicant Shortage	-	-	-	.23*	.06	.31**	.02	-.11	-.07	.34**	.06	-.07	.19	-

Note. Coding of applicant shortage: 0 = Control group, 1 = Applicant shortage. ICC(2,2) = Two-way random intraclass correlation for the average ratings and for the agreement between the ratings of the original raters and the additional raters. AS = Applicant shortage group, CG = Control Group, IM = Impression Management. Intraclass correlations are based on $N = 78$ participants as one participant requested to delete the recording. $n_{AS} = 40$, $n_{CG} = 39$. Numbers in the diagonal represent Cronbachs's alpha of the scales.
*$p < .05$, **$p < .01$.

Table 6.

Means, Standard Deviations, Results of the One Tailed t-Tests and Effect Sizes for the Experimental Groups

Scale	M_{CG} (SD_{CG})	M_{AS} (SD_{AS})	$t(77)$	d	95% CI (of d)
Self-Reported IM	3.13 (0.67)	3.42 (0.57)	2.05[*][a]	0.51	[0.02, 0.91]
Self-Reported Assertive IM	2.79 (0.74)	2.88 (0.79)	0.53[b]	0.12	[-0.32, 0.56]
Self-Reported Defensive IM	3.47 (0.90)	3.96 (0.58)	2.85[**][ab]	0.65	[0.20, 1.10]
Verbal IM	3.75 (0.50)	3.77 (0.61)	0.15	0.03	[-0.41, 0.48]
Nonverbal IM	2.82 (0.74)	2.66 (0.81)	-0.95	-0.21	[-0.65, 0.24]
Observed Assertive IM	2.43 (0.42)	2.37 (0.46)	-0.58	-0.14	[-0.58, 0.31]
Observed Defensive IM	2.33 (0.45)	2.61 (0.32)	3.18[**][a]	0.72	[0.26, 1.17]
Professionality	3.79 (0.51)	3.85 (0.69)	0.51	0.10	[-0.34, 0.54]
Social Competence	3.81 (0.33)	3.76 (0.36)	-0.62	-0.15	[-0.59, 0.30]
Perceived Organizational Attractiveness	3.24 (0.56)	3.46 (0.59)	1.71[*]	0.38	[-0.06, 0.83]

Note. AS = Applicant shortage group, CG = Control group, IM = Impression Management. Results for the observed measures (verbal IM, nonverbal IM, observed assertive IM, observed defensive IM, professionality, social competence, and organizational attractiveness) are based on the average ratings of the respective two raters.

[a] = For these *t*-tests degrees of freedom were corrected for inhomogeneity of variance.

[b] = These results were compared to a Bonferroni-corrected α-level of .025 because they are results from post-hoc tests. $n_{AS} = 40$, $n_{CG} = 39$.

[*]$p < .05$, [**]$p < .01$.

Table 7.

Regression Results for the Mediation of Self-Report Defensive IM and Observed Defensive IM between Applicant Shortage and Perceived Organizational Attractiveness

Model	R^2	Coefficient	SE	p	95% CI
Single Effects Self-Report					
Applicant Shortage → Self-Reported Defensive IM	.10	0.49	0.17	<.01	[.15, .82]
Applicant Shortage → Self-Reported Assertive IM	.00	0.09	0.17	.60	[-.25, .43]
Single Effects Observer					
Applicant Shortage → Verbal IM	.00	0.02	0.13	.88	[-.23, .27]
Applicant Shortage → Nonverbal IM	.01	-0.17	0.18	.35	[-.52, .18]
Applicant Shortage → Observed Defensive IM	.12	0.28	0.09	<.01	[.11, .45]
Applicant Shortage → Observed Assertive IM	.00	-0.06	0.10	.56	[-.26, .14]
Applicant Shortage → Perceived Organizational Attractiveness	.04	0.27	0.19	.09	[-.03, .47]
Model Complete Self-Report	.19	-	-	<.01	-
Self-Reported Defensive IM → Perceived Organizational Attractiveness	-	0.32	0.09	<.01	[.14, .49]
Self-Reported Assertive IM → Perceived Organizational Attractiveness	-	-0.05	0.09	.57	[-.22, .12]
Applicant Shortage → Perceived Organizational Attractiveness	-	0.07	0.13	.57	[-.18, .32]
Model Complete Observer	.52				
Verbal IM → Perceived Organizational Attractiveness	-	0.39	0.10	<.01	[.18, .60]
Nonverbal IM → Perceived Organizational Attractiveness	-	0.11	0.07	.12	[-.03, .26]
Observed Defensive IM → Perceived Organizational Attractiveness	-	0.64	0.13	<.01	[.38, .90]
Observed Assertive IM → Perceived Organizational Attractiveness	-	0.36	0.11	<.01	[.13, .60]
Applicant Shortage → Perceived Organizational Attractiveness	-	0.08	0.10	.45	[-.13, .28]

Note. CI = Confidence interval, IM = Impression management. The 95% confidence interval for the effects was obtained by the bias-corrected bootstrap with 10,000 resamples. Results for the observed measures (verbal IM, nonverbal IM, observed assertive IM, observed defensive IM, professionality, social competence, and organizational attractiveness) are based on the average ratings of the respective two raters. $N = 79$.

Table 8.

Results for the Indirect Effects of Applicant Shortage over Self-Reported Defensive IM, and Observed Defensive IM on Perceived Organizational Attractiveness

Model	IE_{med}	SE_{Boot}	95% CI
Total Indirect Effect Self-Report	.13	0.05	[.04, .25]
Applicant Shortage → Self-Reported Defensive IM → Perceived Organizational Attractiveness	.13	0.05	[.04, .26]
Applicant Shortage → Self-Reported Assertive IM → Perceived Organizational Attractiveness	.00	0.02	[-.06, .01]
Total Indirect Effect Observer	.13	0.09	[-.05, .30]
Applicant Shortage → Verbal IM → Perceived Organizational Attractiveness	.01	0.04	[-.08, .10]
Applicant Shortage → Nonverbal IM → Perceived Organizational Attractiveness	-.02	0.02	[-.07, .01]
Applicant Shortage → Observed Defensive IM → Perceived Organizational Attractiveness	.15	0.06	[.06, .28]
Applicant Shortage → Observed Assertive IM → Perceived Organizational Attractiveness	-.02	0.03	[-.10, .04]

Note. The 95% confidence interval for the effects was obtained by the bias-corrected bootstrap with 10,000 resamples. Results for the observed measures (verbal IM, nonverbal IM, observed assertive IM, observed defensive IM, professionality, social competence, and organizational attractiveness) are based on the average ratings of the respective two raters. IE_{med} = Completely standardized indirect effect of the mediation. SE_{Boot} = Standard error of the bootstrapped effect sizes, CI = Confidence interval. $N = 79$.
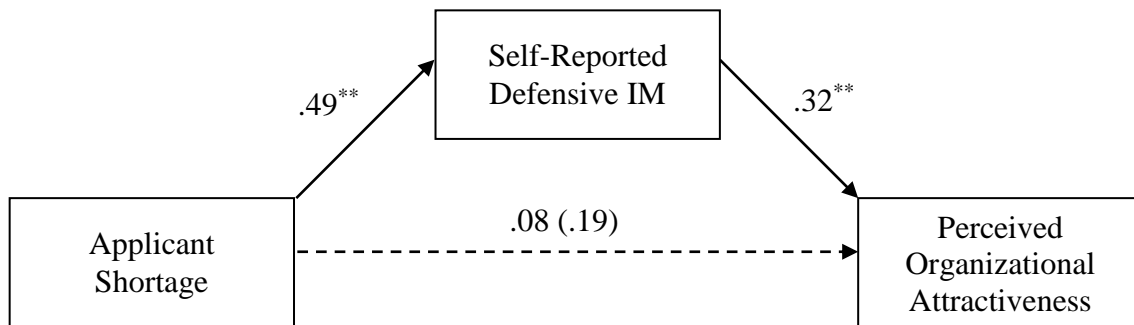
Figure 2. Mediation of self-reported defensive IM between applicant shortage and perceived organizational attractiveness. This figure only displays significant paths of the mediation model for self-reported measures. IM = Impression management.
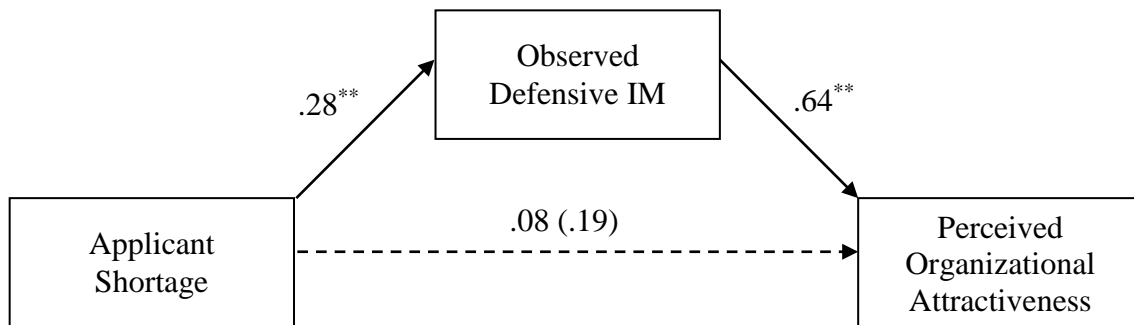$^{*}p < .05$, $^{**}p < .01$.

Figure 3. Mediation of observed defensive IM between applicant shortage and perceived organizational attractiveness. This figure only displays significant paths of the mediation model for observed measures. IM = Impression management.
$^{*}p < .05, ^{**}p < .01$.