

An Examination of Attractiveness Biases in the Context of Hiring Through Social Networking Sites

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The impact of physical attractiveness and amount of information presented through LinkedIn was examined in this study. Participants recruited through the professional networking site, LinkedIn, were asked to look at one of six LinkedIn profiles and make judgments based on the information presented. The study design was a 3 x 2 between-subjects factorial design in which the factors were attractiveness x amount of information. Analyses revealed no support for the effects of attractiveness or amount of information presented on subjective evaluations of several job-related outcomes. However, post-hoc exploratory analyses revealed important findings with regards to age and gender of participants.

INTRODUCTION

As an employer or hiring manager it is important to choose the right applicants for a position. Emphasis must be placed on the relevant knowledge the potential employee has of the roles and duties required on the job, the skills needed to be successful and to produce the required results, and the capabilities the individual must possess in order to obtain these results. This is true not only for the position, but also for the organization. Failure to properly take into account all relevant factors when selecting applicants could result in severe repercussions, including lawsuits against the organization, tarnished reputations, and decreases in performance, ultimately affecting profitability (Maclane & Walmsley, 2010; Outtz, 2010).

However, judgments can become clouded by the introduction of certain irrelevant information, which may lead to an improper evaluation of the candidate's performance potential. Therefore, it is necessary to be aware of biases that may sway one's decision from choosing one applicant over another. These biases may arise at any stage of employment, but are generally more pronounced when minimal information is known about the individual (Neuberg & Fiske, 1987), and may be the case when investigating potential job candidates through Internet networking sites.

Sites like LinkedIn have become very popular and recruiters often review information about applicants from these sites (Heathfield, 2013). Unfortunately, to date, there has been minimal information on selection biases in the context of Internet networking sites. Thus, the present study is

concerned with investigating a particular type of bias—attractiveness bias—and its effects on employment outcomes when investigating and evaluating a candidate through an Internet networking site. We also examine whether this bias can be attenuated by applicants providing more job-relevant information on their profiles.

Internet Networking Sites

The use of social networking sites as a tool for gathering information about potential employees is becoming more and more commonplace in the hiring process as the pressure to select only the best employees increases (Jackson, Schuler, & Werner, 2008). Boyd and Ellison (2007) define social networking sites as an Internet service that allows users to construct a user profile within a “bounded system” (p. 211), share information about the individual’s connections (i.e., other users), and view information specific to his or her connections. This trend of using social networking sites to obtain supplemental information about candidates is considered a valuable tool by recruiters due to its ease with which it allows employers to gather data (Roberts, 2009). It is not surprising, then, to learn the percentage of employees utilizing Internet networking sites as a screening tool has increased drastically in recent years. The Vice President of Human Resources at CareerBuilder (2009) stated that 45 percent of employers surveyed in a 2,600 hiring manager participant pool used networking sites to screen candidates for employment as opposed to only 22 percent just a year before (Roberts, 2009). Furthermore, this survey reveals that information about candidates obtained through use of social networking sites have some weight in the hiring decisions of employers. Specifically, of the 45 percent of hiring managers who confirmed use of social networking sites to supplement hiring decisions, 24 percent stated that information found via this method helped to confirm decisions, and 34 percent stated that information found via this method led to the rejection of potential hires. As is made apparent, Internet networking sites are growing increasingly prominent in employee hiring and selection.

One popular site that managers frequent to gather information about potential hires is LinkedIn. LinkedIn is a social networking site used almost exclusively for building professional relations and has become extensively used since its launch in 2003. According to the most recent data on its website (October, 2013), LinkedIn has gained over 65 million users throughout 200 countries and boasts representation of all Fortune 500 companies since its inception. Additionally, it claims having been the medium through which these top companies have found hires. In fact, John Campagnino (2012), the head of recruiting at Accenture, which is a global management and consulting firm, recently announced that he would hire up to 40 percent of his new employees through LinkedIn (Hempel, 2010). Indeed, Forbes (2012) has recognized that LinkedIn’s recruiting services is “the fastest growing public provider of corporate recruiting solutions” (Bersin, 2012).

Theoretically, social networking sites like LinkedIn allow employers the opportunity to form more informed impressions about their potential hires, which could lead one to make more accurate judgments about the suitability of the candidate for the position. However, there are a few issues with screening applicants online via this method. The first is that irrelevant biases (e.g., attractiveness bias) could influence a hiring manager or recruiter’s evaluation of a candidate. Another deals with the issue of the amount of information made available on a candidate’s page. Preliminary research shows significant differences in the amount of information that applicants put on their LinkedIn profiles (Zide, Elman, & Shahani-Denning, 2013).

Attractiveness Bias and Impression Formation

One of the most prominent and researched biases in the employment process is the “attractiveness bias.” Attractiveness bias entails treating or perceiving an individual differently given his or her physical appearance (Hosoda, Stone-Romero, & Coats, 2003). According to the research of Neuberg and Fiske (1987), the looks of an individual are the first thing we see when coming into contact with them and may influence interpersonal relations with that person through immediate impression formation. Given this, it is reasonable to assume that attractiveness bias is especially pertinent in the context of employee selection. Specifically, attractiveness bias and impression formation have been theorized to go hand-in-

hand in the employment process, as research has shown that judgments about individuals are often times made simply by glancing at their physical features (Heilman, 2012).

As not everyone is perceived to be equally attractive, discrimination based on physical attractiveness can occur, sometimes causing people to make decisions they might otherwise not have had they not been introduced to the physical features of the target person. In fact, the Americans with Disabilities Act (ADA) of 1990 has addressed this issue, making it unlawful to discriminate against qualified applicants based on disabilities including cosmetic disfigurements, skin conditions, and obesity. Considering that action is being taken to penalize employers on unfair discrimination practices, organizations must now be even more aware of the choices they make in regards to fair employment practices.

This issue of attractiveness biases has been evidenced to occur in workplace situations, from pre-employment to promotional situations. Moreover, researchers have postulated that attractiveness can work both for and against an individual (Heilman & Saruwatari, 1979). However, it may be prudent for one to consider how compelling the evidence for attractiveness bias really is. A review of the attractiveness bias literature provides support that attractiveness can influence a plethora of societal interactions and phenomena including negotiations (Solnick & Schwitzer, 1999), salary disparities (Frieze & Russell, 1991; Watkins & Johnston, 2000), perceived qualifications (Heilman & Saruwatari, 1979), and performance appraisals (Bardack & McAndrew, 1985; Shahani, Dipboye, & Gehrlein, 1993). With that said, the evidence that attractiveness bias does not play a role in workplace outcomes is also plentiful (e.g., Benassi, 1986; Cann, Siegfried, & Pearce, 1981; Dipboye, Arvey, & Terpstra, 1977; Morrow & McElroy, 1984; Shahani et al., 1993).

A key note to address about these studies, however, is the fact that none were conducted using the Internet as an information-exchange interface. Nor have the previous studies examined how the amount of information known about a candidate affects an individual's perceptions about that said candidate. This is important because organizations are increasingly turning to the Internet to recruit, screen, and hire applicants. In doing so, hiring managers may be faced with a wealth of information pertaining to their candidates, and as such, it may be prudent for us as a field to understand the effects that various kinds and amounts of information obtained from the Internet may have on hiring in organizations. More specifically, although it is not customary for those in the United States to submit profile pictures along with their résumés, it seems that many employers and hiring managers are finding profile pictures of possible candidates through use of Internet networking sites. Coupling this with the fact that all research pertinent to attractiveness bias in prospective employee evaluation has been conducted with paper résumés, it is advantageous to examine attractiveness bias in the context of Internet networking sites.

Currently, there is a limited body of research pertaining to attractiveness in the context of social networking sites. However, the research on impression formation within in the context of social networking sites is growing and provides us with some interesting findings. As stated earlier, impression formation is most salient in the case in which a decision-maker has minimal information about the target person (Neuberg & Fiske, 1987). An informal review of social networking website profile pages reveals significant variability in the amount and type of information applicants choose to present about themselves. This may be an important point to investigate as previous literature has demonstrated that impressions about information are often impacted by the amount of information available about the target person (Neuberg & Fiske, 1987). Indeed, scholars caution those using social networking sites in employee selection due to insufficient systematic research in their use in selection procedures (Davison, Maraist, Bing, Papinchock, Southwell, & Tamanini, 2009; Schings, 2009).

This note of caution is justified when considering research by Tong, Van Der Heide, Langwell, and Walther (2008) whom found that even the number of friends or connections an individual has might contribute to the impression formation processes made about said individual. The number of connections an individual has about his or herself is one of several factors that may be used when consideration of a successful job candidate. Studies have shown that when viewing profiles, raters consider the professional orientation and quality of résumés (Bohnert & Ross, 2010) depicted. Assessments of personality (Vazire & Gosling, 2004), intelligence, and potential performance (Bohnert & Ross, 2010) are also often made when viewing candidate information through online mediums. Further, raters who are adequately trained

in candidate assessment generally produce valid decisions (Bohnert & Ross, 2010; Kluemper & Rosen, 2009). However, most, if not all, of the studies examining these assessments have not examined them in the context of a purely professional networking site, instead using Facebook. Considering that LinkedIn is an extremely popular professional networking site which employers use in candidate selection, it would be prudent for us to examine biases in this specific context. More specifically, the present study addresses the effects of attractiveness biases when viewing applicant qualifications and past experiences through a professional networking site, namely, LinkedIn. In this study, we address this research question by manipulating the amount of information and determining whether it attenuates the effects of attractiveness bias. Thus, the hypotheses for the following study are as follows:

Hypothesis 1: There will be a main effect of attractiveness on employment outcomes, in that the more attractive a stimulus is perceived to be, the higher the ratings they will receive for employment outcomes.

Hypothesis 2: There will be a main effect of amount of information presented, such that more information presented will positively affect dependent measures.

Hypothesis 3: There will be an interaction between attractiveness and the amount of information presented such that attractiveness will drive decision-makers' decisions when minimal information is known about the candidate, but will be attenuated when more information about the candidate's qualifications is available.

METHOD

Preliminary Procedures

Two pilot studies were conducted in order to create comparable profiles varying in amount of information and to manipulate attractiveness of the stimulus pictures. Briefly, the first pilot study was concerned with creating comparable profiles that varied in amount of information. This was done by creating content for a LinkedIn profile. After the profile was created, information from that profile was reworded and shortened to create a shortened version of the profile. Participants for this pilot study were asked to rate how comparable the profiles were. The second pilot study was concerned with obtaining two stimulus pictures that differed significantly in ratings of attractiveness. Participants recruited for this pilot study were asked to rate ten pictures in terms of attractiveness. After maintaining that 1) the profiles were perceived similarly in terms of qualifications but differed in amount of information, and 2) there were two pictures differing significantly in attractiveness, and an additional category that had no picture; these conditions were placed into a LinkedIn profile format.

Participants, Design, and Procedure

Recruitment methods for obtaining participants included direct messaging on LinkedIn and referrals (HR groups and referrals). The 291 participants recruited for the study varied in several demographic factors. On average, participants were 38.2 years of age ($SD = 12.337$). Of the participants, 47.1% were males, 68.6% were full-time employed only, 11% were part-time employed only, and 4.1% were students only, 10.7% were unemployed, 2.8% were employed part-time while matriculated students, and 2.8% were employed full-time while matriculated students.

Using an online survey creation tool, the participants were randomly assigned to one of six experimental conditions. The design for this study was a 3 x 2 between-subjects factorial design in which the factors were attractiveness (low attractiveness vs. no picture vs. high attractiveness) x amount of information (less information – 143 words vs. more information – 409 words). Participants were told that researchers were collecting information on the decision-making processes of participants given minimal information. The details of the study were not disclosed to participants to minimize bias. The participants were required to give consent before continuing. After obtaining written consent, the participants were asked to role-play the position of a hiring manager for a fictional organization who was evaluating a potential candidate for hire for a marketing position. A job description for the position of marketing

manager was provided to the participants. The gender-neutral position of marketing manager was chosen in efforts to reduce sex-role stereotypes of a particular job or position (Heilman, 1983).

To evaluate this stimulus, each participant was asked to look at the candidate's qualifications and give feedback. The candidate information was presented as a LinkedIn profile. After reviewing the material, participants were asked to rate the stimuli on various measures. Upon completion of this task, participants were asked to fill out a questionnaire including demographic questions. Participants were then redirected to a new page where they were debriefed.

Control Variables

There were several variables that were controlled for in this experiment.

Number of Connections

As previous research (e.g., Tong, Van Der Heide, Langwell, & Walther, 2008) has shown that the number of connections an individual has may impact employment-relevant factors, we controlled for this variable by excluding this variable from the profile content.

Presence of Recommendations and/or LinkedIn Endorsements

The number and presence of recommendations an individual has was controlled for in this experiment by excluding this information from the experiment.

Membership in LinkedIn Groups

Information about the stimulus' involvement in LinkedIn groups or following of certain pages was excluded from the experiment.

Independent Variables

Stimulus Attractiveness

The attractiveness of the stimuli were manipulated such that they fit into one of the following conditions: no picture, a picture previously rated low in attractiveness, and a picture previously rated high in attractiveness. This was done in a pilot study. The gender and race of stimulus person in the picture, backgrounds of the pictures, and shirts worn in the pictures were controlled for. More specifically, individuals in the stimulus pictures were Caucasian women wearing professional blouses. The difference between the mean attractiveness ratings for the highly attractive ($M = 7.26$, $SD = 1.32$) and less attractive pictures ($M = 3.52$, $SD = 1.48$) was 3.741, which was significant at the $p = .001$ level.

Stimulus Amount of Information

The level of information presented on the stimuli was manipulated such that it exhibited less information or more information. The controlled factors between the two sets of information were that the number of job positions, titles of job positions, and companies worked for. Differences between the sets of information were how many words were used in the content. In total, there were 143 words in the condition with less information and 409 words in the condition with more information.

Information portrayed in the content was created through use of O*NET for the position of marketing manager. Additional information for the *more information* condition was mostly created with more descriptors. For example, the following is a sentence in the *less information* condition: "Worked closely with senior executives to develop and execute marketing strategies." The following sentence was the comparable sentence in the *more information* condition: "Primary duties focused on working closely with senior executives and department heads to develop and execute marketing strategy/plans." We conducted a t-test to assess whether the sets of information differed significantly in perceived relevancy to the job position description, which was measured as a 1-item measure and asked participants the following: "On a scale of 1-7 with 1 being 'Not at all relevant' and 7 being 'Extremely relevant', please rate how relevant this candidate's experience is for this position." The t-test performed on the present sample indicated no difference in relevancy to the job description, $F(1, 289) = .015$, $p > .05$.

Dependent Measures

Participants were given a candidate evaluation form to evaluate their perceptions regarding the qualifications of the stimuli. In total, perceived relevancy of profile information to the job description, qualifications, ability to perform, recommendations for hire, intention for hire, and a recommended starting salary were obtained. Each dependent variable was measured with one item. These evaluation items are in accordance with those used by previous research (Shahani et al., 2011). Example items are: “On a scale of 1-7 with 1 being *Not at all relevant* and 7 being *Extremely relevant*, please rate how relevant this candidate’s experience is for this position” and “On a scale of 1-7 with 1 being *Not at all qualified* and 7 being *Extremely qualified*, please rate the likelihood that the candidate can perform the tasks required of this position.” Recommendations for starting salary was obtained by telling participants that the average starting salary for the position of Marketing Manager was \$47,000 per year and asking for the participant’s recommendation within a range of \$30,000 and \$130,000 per year.

RESULTS

Descriptive statistics are displayed in Table 1. Correlations between variables can be found in Table 2. Hypotheses were tested with univariate ANOVA analyses. Analyses for hypothesis 1, which hypothesized that attractiveness would be associated with dependent measures, found the following: relevancy $F(2, 286) = .695, p > .05$, qualifications $F(2, 286) = .354, p > .05$, ability to perform $F(2, 286) = .425, p > .05$, likelihood to recommend $F(2, 286) = .940, p > .05$, intent to hire $F(2, 286) = .796, p > .05$, salary recommendations $F(2, 286) = .086, p > .05$. Results indicated that there was no main effect of attractiveness on any of the dependent variables, and thus hypothesis 1 was not supported. Hypothesis 2, which stated that the amount of information would have a significant effect on the dependent measures, too, failed to find support. The results are as follows: relevancy $F(1, 286) = .122, p > .05$, qualifications $F(1, 286) = .243, p > .05$, ability to perform $F(1, 286) = .109, p > .05$, likelihood to recommend $F(1, 286) = .352, p > .05$, intent to hire $F(1, 286) = .112, p > .05$, salary recommendations $F(1, 286) = .812, p > .05$. The present researchers also expected that there would be an interaction between the level of attractiveness and amount of information presented to the participants in hypothesis 3. Analyses showed that the predicted interaction was nonsignificant for all of the dependent measures; relevancy $F(2, 286) = .839, p > .05$, qualifications $F(2, 286) = .105, p > .05$, ability to perform $F(2, 286) = .565, p > .05$, likelihood to recommend $F(2, 286) = .042, p > .05$, intent to hire $F(2, 286) = .015, p > .05$, and salary recommendations $F(2, 286) = .155, p > .05$. Thus, hypothesis 3 was not supported.

Exploratory Data Analyses

Although the hypotheses were not supported, the authors recognized that further data analyses pertaining to certain demographics might shed more light on biases in the employment decisions. Exploratory data analyses revealed some important trends in the data. Hierarchical linear regression was used to test variables that have been cited in the literature as influencing employment outcomes on all dependent variables. Significant results are elaborated on below.

Model 1: Attractiveness x Age

Rater age is a heavily researched topic in the attractiveness bias literature (e.g., Morrow, McElroy, Stamper, & Wilson, 1990; Quereshi & Kay, 1986). Earlier studies investigating the effect of rater age have found that rater age is associated with leniency in ratings (i.e., younger raters are more lenient in their ratings; Quereshi & Kay, 1986), whereas more recent studies have been less conclusive. This trend was examined in Hosoda et al.’s (2003) meta-analysis. Specifically, the researchers proposed that the effects of attractiveness bias had decreased in recent years and found support for that claim. Given that the said meta-analysis was conducted in 2003, we investigated the relationship between rater age and our dependent variables. Of the analyses, the only noteworthy relationship was the recommendations to hire – rater age relationship was moderated by the physical attractiveness of the subject (see Table 3). Figure 1 is a graphical depiction of said marginally significant moderation, which shows that younger

participants (1 *sd* below the mean age) are more likely to recommend those rated low in attractiveness than those rated high in attractiveness, but older participants (1 *sd* above the mean age) are more likely to recommend those rated high in attractiveness than those rated low in attractiveness. With that said, an increase in age is met with decreased levels of recommendation for both attractiveness conditions.

Model 2: Age x Gender

The attractiveness bias literature has addressed the importance of other rater characteristics in addition to rater age, such as rater gender (see, Hosoda et al., 2003). Indeed, researchers have argued that rater gender may have implications for various employment decisions (Shahani-Denning, Andreoli, Snyder, Tevet, & Fox, 2011). More specifically, researchers have found evidence that women may judge females more harshly than males do (e.g., Roehling, 1999). Given that our stimulus pictures were of women only, we investigated this effect, by regressing rater age and gender on all dependent variables; however, only salary was significant (see Table 4). Figure 2 is a depiction of this moderation. This figure shows that gender moderates the relationship between age and salary recommendations. More specifically, age was associated with a decrease in salary recommendations for males, but was not associated with any change in salary recommendations for females.

GENERAL DISCUSSION

Our main experiment attempted to explore the relationship of stimulus attractiveness and amount of information presented about a candidate's relevant experience on candidate evaluation. Synthesizing Heilman and Saruwatari's (1979) beauty is beastly phenomenon, which suggests that perceived attractiveness of a target may bias an evaluator's perception of employment relevant outcomes, and Neuberg and Fiske's (1987) impression formation hypothesis, which states that biases may be more prominent when minimal information about a target, we proposed that attractiveness bias may be attenuated in the presence of more information about a prospective candidate. In order to test this hypothesis, we collected data from working professionals. Data analyses revealed no support for the hypotheses. We then conducted exploratory analyses to examine additional relationships not formally hypothesized in the original experiment. To do this, we examined several variables that have been cited in the literature to hold importance when considering attractiveness biases. To that end, we tested several relationships, but found support for only two: 1) rater age relationship was moderated by the physical attractiveness of the subject, and 2) rater gender moderated the relationship between rater age and salary recommendations.

Despite some past research finding evidence for attractiveness biases on hiring decisions, it is not completely surprising that we did not find evidence to support this phenomenon. This is because there have been mixed results for the support of attractiveness biases in regards to hiring decisions made in past research. With that said, we hypothesize several reasons that may have contributed to the nonsignificant findings. One possible explanation for why no significant relationships were found could be that the subjects judged the information presented on the profiles to be similar enough in job relevance and qualifications and placed more weight on this than on attractiveness, thus attenuating attractiveness bias. In fact, both profiles (high and low information) were specifically created to be equal in job relevance. Another possible explanation for why there was no main effect of attractiveness could be drawn from Hosoda et al.'s (2003) meta-analysis, which evidenced the effect of attractiveness bias to have considerably decreased throughout the years. If that trend has continued to decrease, then it would be logical that the effects of attractiveness bias would be nonsignificant in our dependent measures. Further, it may be more likely to see this effect in a within-subject design where relative comparisons are being made. Future research should present multiple profiles for recruiters to evaluate. This would result in better external validity as recruiters typically evaluate more than one profile at a time.

Implications for Employee Hiring

The significant results of the first exploratory analysis indicate that younger participants are more likely to recommend those rated low in attractiveness than those rated high in attractiveness, but older participants are more likely to recommend those rated high in attractiveness than those rated low in attractiveness. This may have implications for employee hiring in that training should be given to those individuals involved in recruiting and hiring to emphasize a prospective candidate's work-relevant qualities and to minimize the effect that attractiveness may have on recommendations. Given the analyses, it seems that younger individuals are more susceptible to these biases; however, the case could also be made that older individuals are susceptible to attractiveness biases as well, though, in a negative light. Indeed, Heilman and Saruwatari (1979) argue that attractiveness may have detrimental effects for individuals. As stated earlier, this is extremely important given antidiscrimination laws. As such, it may be helpful for recruiters and hiring managers to receive training to minimize any upward or downward biases that attractiveness (or lack thereof) may have on candidate evaluations.

The exploratory analyses also revealed an interaction with regards to age and gender of participant on recommended salary. More specifically, although female participants' recommended starting salary initially started off lower than that of males, this recommended salary amount increased from younger participants to older. Younger male participants, however, recommended a higher starting salary than both younger female participants and older males. This is interesting in that participants were given information as to what they could expect an average hire for that job position to make. Specifically, participants were told that the average starting salary for the position of Marketing Manager was found to be \$47,000 per year. Regardless of age, participants tended to recommend salaries that were above the stated starting salary; however, younger males tended to recommend starting salaries that were significantly above others. As such, practitioners may be able to use this information when training human resources personnel. Specifically, training with human resources personnel could include information highlighting these potential leniency biases in the context of salary negotiation.

Limitations and Future Research

Despite these contributions, some limitations of our work should be noted. First, it has been argued that beauty is in the eye of the beholder. To this extent, the author pilot tested pictures to obtain attractiveness ratings. Significant differences were found between the pictures chosen for the studies, however manipulation checks were not included in the actual survey. This is problematic in that the pilot sample may not have perceived attractiveness in the same way that the final sample perceived the stimuli. If this was the case, then this could have been the cause of the nonsignificant findings for the results of the attractiveness manipulation. This can be corrected by a few ways.

The first way to correct this is to include a manipulation check in future research. This data will help us gather more accurate information as to how attractive or unattractive the stimulus is perceived. This data is useful in that it will help us to accurately determine that significance is maintained between subject perceptions of attractiveness. As the present researcher is unsure as to how attractiveness was perceived by the final sample and thus whether or not significance between the two groups was maintained, this would be a sure way to make sure of that. Another way to address the issue is to use technology to generate average faces to show as stimuli. Research has shown that perceptions of beauty can be mathematically calculated and created (Pallett, Link, & Lee, 2010). Mathematically average faces have consistently been shown to be rated as more attractive than those that are not. By averaging faces in order to obtain attractiveness, and conversely unattractiveness, researchers may be able to control for perceptions of attractiveness that way.

Another limitation concerns the sample. The sample consisted of working professionals who were asked to take this survey online. Although there are many advantages of online survey research, including lowered costs, access to unique populations, and efficiency, researchers have noted the limitations of using online-based surveys as well (Wright, 2005). These include knowing too little about the characteristics of individuals in online communities aside from basic demographic variables and validity of self-reported responses. With that said, validity of responses is a concern that is not limited to

Internet surveys, but is one that is notable in all surveys. That noted, one strength of our sample to be that was that it was composed mostly of individuals in the human resources sector. As such, our sample can be thought of as somewhat homogenous in terms of a key characteristic—being in the human resources sector of the industry.

Another limitation pertains to our measurement of age. In our data analyses investigating the interaction between rater age and physical attractiveness of the subject, we found that an increase in age is met with decreased levels of recommendations regardless of attractiveness of the subject. Future research could examine whether this trend is replicated with within-subjects designs, or to confirm that this trend is based on generational differences.

A final limitation of our survey was the use of 1-item measures of our dependent variables. Scholars argue that multiple-item scales generally provide more validity than single-item measures (e.g., DeVellis, 2012). However, there is evidence that single-item measures is appropriate for one-factor scales (e.g., Loo, 2011; Wanous, Reichers, & Hudy, 1997), which is the case in our study. As such, we believe that validity of our results has not been compromised by using single-item measures for our dependent variables.

Concluding Remarks

Despite the nonsignificant results found in this study, it is heartening to see that attractiveness biases might indeed play less of a role in employee selection, even with the advent of new technology that renders an employer capable of possibly viewing prospective employee pictures. With that said, there is still much to be researched for online hiring tools and their implications for employee selection and hiring. Indeed, there are several improvements that can be made to learn more about the relationships between biases in employee selection and viewing information through online mediums. As the world shifts to the Internet for more and more selection procedures, it will become more and more necessary to address the new array of issues that may arise by way of this trend. In conclusion, the authors still holds their positions that tapping into the factors and biases in employment decisions in the online community is still fertile ground for conducting research on important topics.

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TABLE 1
DESCRIPTIVE STATISTICS BY CONDITIONS

Dependent Measures		Unattractive		No Picture		Attractive	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
<i>Less Information</i>	Relevancy	5.63	1.18	5.35	1.13	5.52	1.13
	Qualifications	5.21	1.14	5.12	1.20	5.30	1.06
	Able to Perform	5.21	1.10	5.12	1.22	5.30	1.19
	Recommend	4.98	1.19	4.78	1.30	5.06	1.28
	Hire	4.79	1.23	4.57	1.44	4.83	1.38
	Salary	57865.85	16340.48	53582.75	17806.12	55183.35	11643.56
<i>More Information</i>	Relevancy	5.31	1.08	5.46	1.37	5.64	1.19
	Qualifications	5.10	1.15	5.12	1.27	5.21	1.14
	Able to Perform	5.04	1.19	5.26	1.21	5.21	1.10
	Recommend	4.83	1.40	4.74	1.55	4.98	1.19
	Hire	4.71	1.43	4.56	1.49	4.79	1.23
	Salary	56110.64	15161.40	58593.75	18231.13	57865.85	16340.48

TABLE 2
INTERCORRELATIONS AMONG VARIABLES

Variable	<i>M</i>	<i>SD</i>									
1. Attractiveness	2.00	0.81									
2. Amount of Info	1.50	0.50	.02								
3. Age	38.63	12.28	.02	.02							
4. Relevancy	5.47	1.18	.03	.01	-.24*						
5. Qualifications	5.16	1.15	.02	.02	-.26*	.77*					
6. Ability to Perform	5.18	1.17	.04	.01	-.28*	.69*	.72*				
7. Recommendation for hire	4.88	1.32	.03	.03	-.28*	.73*	.76*	.79*			
8. Hire Intention	4.70	1.37	.01	.01	-.28*	.63*	.72*	.78*	.86*		
9. Salary Recommendation	56618.40	16064.14	.01	.06	-.08	.17*	.26*	.20*	.25*	.30*	
10. Gender	1.53	0.50	.04	.05	-.05	.08	.04	.01	.06	.05	-.04

Note. *N* = 291. Gender was coded as 1 = males and 2 = females. * *p* < .01.

TABLE 3
HIERARCHICAL REGRESSION OF ATTRACTIVENESS AND AGE ON RECOMMENDATIONS FOR HIRE

Variable	<i>B</i>	<i>SE</i>	β	<i>t</i>
Step 1				
Attractiveness	.05	.09	.03	.56
Age	-.03	.01	-.28	-4.98
$\Delta R^2 = .08$				
$F(2, 187) = 12.53^{**}$				
Step 2				
Attractiveness	-.46	.30	-.28	-1.55
Age	-.06	.02	-.53	-3.57
Attractiveness X Age	.01	.01	.42	1.81
$\Delta R^2 = .01$				
$F(1, 187) = 3.27^a$				

Note. *N* = 291. ***p* < .01. ^a*p* = .07

TABLE 4
HIERARCHICAL REGRESSION OF GENDER AND AGE ON SALARY
RECOMMENDATIONS

Variable	<i>B</i>	<i>SE</i>	β	<i>t</i>
Step 1				
Gender ^a	-1359.14	1887.81	-.042	-.72
Age	-110.03	76.86	-.084	-1.43
			$\Delta R^2 = .01$	
			$F(2, 187) = 1.23$	
Step 2				
Gender	-14925.52	6190.42	-.47	-2.41
Age	-636.41	241.30	-.49	-2.64
Age X Gender	350.87	152.59	.583	2.30
			$\Delta R^2 = .018$	
			$F(1, 187) = 2.60^b$	

Note. *N* = 291. ^a 1 = Males, 2 = Females. ^b *p* = .053.

FIGURE 1
ATTRACTIVENESS OF STIMULI BY AGE INTERACTION REGRESSED ON LIKELIHOOD
TO RECOMMEND A CANDIDATE FOR HIRE

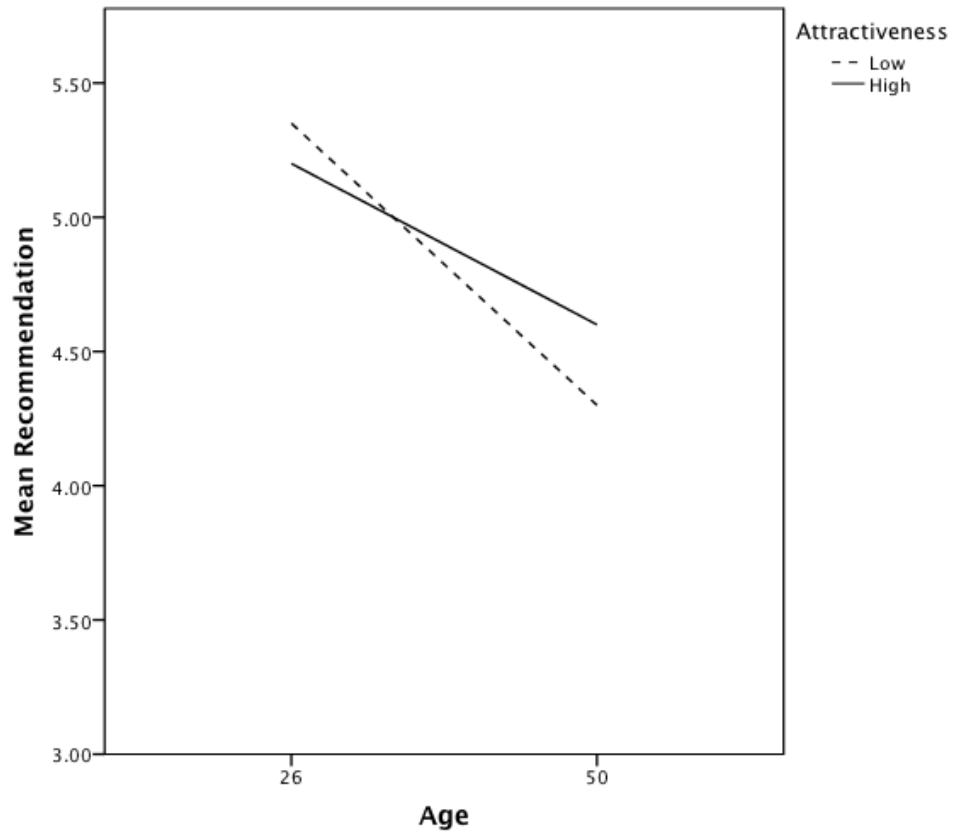


FIGURE 2
SALARY RECOMMENDATIONS BY AGE RELATIONSHIP MODERATED BY GENDER.
NOTE. 1 = MALES, 2 = FEMALES.

