DOI: 10.26387/bpa.285.3

Attractiveness, gender, aptitude: What effects on hiring for managerial, male and female sex-typed jobs

Eric Dose[1], Pascale Desrumaux[1], Sabine Pohl[2], Merielly Dornelas Muzi[1]

[1] PSITEC Psychologie: Interactions Temps Émotions Cognition, Université de Lille
[2] Université Libre de Bruxelles

pascale.desrumaux@univ-lille.fr
eric.dose@outlook.com

ABSTRACT. Molti studi hanno dimostrato che l'attrattività del candidato ha un forte effetto sulla valutazione e la decisione di assumere. Tuttavia, questi studi raramente hanno misurato simultaneamente l'attitudine di un candidato e la tipologia di genere tipica di un lavoro nel contesto delle professioni manageriali. Questo studio ha indagato il ruolo degli stereotipi (attrattività fisica e genere del candidato) e dell'attitudine del candidato sulla decisione di assumere. Alcuni reclutatori esperti (N = 58) hanno valutato otto ipotetici candidati in base al loro curriculum, l'assegnazione variava secondo un disegno di ricerca 2×2×2, che prevedeva tre variabili entro i partecipanti (genere × attrattività × attitudine alta/moderata) e due variabili tra i partecipanti (lavoro tipicamente di genere maschile/femminile; reclutatore maschile/femminile). I reclutatori hanno usato 9 scale per misurare la convenienza di assumere, la desiderabilità e l'utilità del candidato. Le analisi hanno rivelato effetti significativi sull'attrattiva del candidato e sulle capacità mentali generali (GMA). Per il lavoro manageriale prettamente maschile, gli uomini ricevevano valutazioni più alte delle donne, e l'opposto era per le occupazioni manageriali prettamente femminile.

SUMMARY. Many studies have shown that applicant attractiveness has a strong effect on hiring assessments and on hiring decisions. However, these studies have rarely simultaneously measured the applicant's aptitude and the job's sex-type in the context of managerial jobs. This study investigated the role of stereotypes (applicant's physical attractiveness and gender) and of applicant's aptitude on hiring decisions. Professional recruiters (N = 58) rated eight hypothetical applicants based on their resume, which was varied according to a 2×2×2 design including three within-participants variables (gender × attractiveness × high/moderate aptitude) and two between-participants variable (male/female job sex-type; male/female recruiter). Recruiters used 9 scales to measure the applicant's hirability, desirability and utility. The analyses revealed significant main effects of applicant attractiveness and general mental abilities (GMA). For the male sex-typed managerial job, men received higher ratings than women, and the opposite held for the female sex-typed managerial job.

Keywords: *Gender, Attractiveness, Aptitude, Job sex-type, Personnel selection, Hirability, Judgment*

INTRODUCTION

Despite the use of valid hiring methods, numerous biases (Bendick & Nunes, 2012) can threaten the reliability, validity, and fairness of these methods and affect hiring judgments from the initial impression to the final decision. Despite knowing the applicant's objective abilities, in personnel selection situations stereotype such as attractiveness and gender are known to bias hiring decisions. A "what is beautiful is good" stereotype (Berscheid & Walster, 1974; Dion, Berscheid & Walster, 1972) affords a variety of benefits for physically attractive applicants to the detriment of unattractive ones. In the context of attractiveness and gender-bias studies, and considering a lack-of-fit model (Heilman, 1983), the purpose of the present study was to understand how the independent variables of applicant's gender, attractiveness, and general mental abilities (GMA), and the job sex-type influence hiring decisions for managerial jobs.

The studies of attractiveness bias in hiring decisions often target commercial, business, or jobs in finance, or jobs in hospitality such as innkeepers. For these jobs, it is well known that appearance can improve sales and chances to obtain contracts or performance (Ahearne, Gruen & Burke-Jarvis, 1999; Fruhen, Watkins & Jones, 2015). However, we don't know if the attractiveness bias also operates for jobs that imply care, such as in the health-care fields. A recent study (Lee, Pitesa, Pillutla & Thau, 2015) showed that need for cooperation causes recruiters to prefer attractive male candidates while competition causes them to prefer non-attractive male candidates. A question arises whether the beauty bias influences recruiters even when they have to hire for care jobs such as medical jobs. We tested the impact of GMA and attractiveness in occupational contexts where links between attractiveness and judgment of aptitude have not yet been investigated. The study aimed to test hiring decisions and bias in an area where beauty is not normally considered and rarely explored: the medical professions. To test Heilman's model, we distinguished male and female job sex-typing specifically for managerial jobs. In some studies relative to this model the managerial jobs are confounded with male sex-typing. We sought to disambiguate these two factors by selecting both male and female sex-typed managerial jobs and hence studied whether recruitment is influenced by the managerial job's sex-type.

Attractiveness bias

Meta-analyses have confirmed the strength of the attractiveness bias (Hosoda, Stone-Romero & Coats, 2003; Tews, Stafford & Zhu, 2009), which is already present in infancy. Attractive people are perceived as more efficient (Talamas, Mavor & Perrett, 2016), more qualified and more competent (Desrumaux & Pohl, 2014; Dion et al., 1972; Jackson, Hunter & Hodge, 1995) than unattractive people. They are seen as more likely to possess a wide variety of positive qualities, such as intelligence and sympathy, and their work is judged to be of better quality (Drogosz & Levy, 1996). Based on the attractiveness halo, Talamas, Mavor, Axelsson, Sundelin, and Perrett (2016) showed a strong correlation between perceived attractiveness and perceived intelligence. More precisely, more eyelid-openness led to higher ratings of intelligence above and beyond the attractiveness halo. Attractive people are perceived as having more socially desirable features (Desrumaux, De Bosscher & Léoni, 2009; Dion et al., 1972). Accordingly, attractive persons are thought to be responsible for their success, whereas unattractive people are perceived as being responsible for their mistakes.

Moreover, and particularly in the work setting, attractiveness gives rise to positive reinforcement. Thus, beauty increases the chances of getting a job (Baert & Decuypere, 2014; Desrumaux & Pohl, 2014; Hosoda et al., 2003; Jawahar & Mattson, 2005; Ndobo, 2014; Ruffle & Shtudiner, 2015). Beautiful appearance favours callbacks in hiring process (Ruffle & Shtudiner, 2015), assessments of employees' potential (e.g., Marlowe, Schneider & Nelson, 1996). Candidates with the most beneficial Facebook picture obtain approximately 38% more job interview invitations compared to candidates with the least beneficial picture (Baert, 2018). In managerial jobs, the degree of perceived attractiveness in virtual team leaders influences the amount of trust generated in them (Guinalíu & Jordán, 2016). Based on this review, we expected a significant effect of beauty on hiring judgments.

Hypothesis 1: Attractive applicants will be rated higher than unattractive ones for managerial jobs.

Attractiveness bias, sex bias and job sex-type

According to the lack-of-fit model (Heilman, 1983; Heilman & Saruwatari, 1979; Heilman & Stopeck, 1985;

Welle & Heilman, 2007), the occupational gender bias results from an incongruity between the attributes of a person and the perceived nature of the job requirements. On one side of the model lies perceptions of work. Jobs become sex-typed by virtue of both the number of men and women who occupy them (for example, there are more men than women engineers) and the attributes deemed necessary for successful performance (a successful engineer may be expected to exhibit more male, or agentic, traits). On the other side of the lack-of-fit model lie the descriptive stereotypes of women (Welle & Heilman, 2007, p. 234). Women, more than men, are thought to harbor communal attributes, such as nurturance and relationship orientation (Bosak, Sczesny & Eagly, 2008). When the sex stereotype of an applicant fits the sex-type of the job, the applicant is thought to have what it takes to perform well.

If there is a mismatch between the two, as there often is when women are vying for jobs that are considered to be male sex-typed, then the expectation is that the person will not perform successfully in that job (Heilman & Eagly, 2008). Attractiveness in turn is a moderator variable. First, attractiveness enhances gender characteristics and increases perceptions of sex-related attributes. Thus, attractive women and men are respectively perceived as more feminine and more masculine than their less-endowed counterparts (Gillen & Sherman, 1980). Second, the role of attractiveness depends on whether the job is sex-typed. When a job is not sex-typed, feminine or masculine qualities of the applicant are expected and beauty is an asset, for both genders. When a job is sex-typed, qualities linked to the gender that exemplifies the job are seen as required for success.

Finally, the attractiveness bias depends upon the applicant's gender and the job the applicant is seeking. On one hand, beauty in a man increases his probability of being hired for all types of jobs except ones considered typically female. On the other hand, beauty in a woman increases her probability of being hired if she applies for a female-typed job or a non-managerial job (Heilman & Saruwatari, 1979; Heilman & Stopeck, 1985). Explaining how attractive women were not likely to be considered for male-stereotyped jobs in the workplace, some authors proposed the idea of a "beauty is beastly" effect (Braun, Peus & Frey, 2012). Johnson, Podratz, Dipboye and Gibbons (2010) confirmed this effect even for jobs where attractiveness was not required. In their study, if the job was one seen as male-dominated and where appearance was deemed unimportant (manager of research, director of finance, director of security, hardware sales, or construction supervisor), attractive women were not seen as suitable for the job.

Attractiveness bias, sex bias and managerial jobs

For a male-typed managerial job, an attractive man will be preferred over an unattractive one (Desrumaux-Zagrodnicki, Leoni & Masclet, 2003; Heilman, Block, Martell & Simon, 1989). Moreover, a beautiful woman will be rejected because of the accentuation of her perceived feminine attributes. For this reason, attractive women are rejected for male-typed jobs. Managerial jobs are usually male-typed. Finally, an attractive woman would receive low ratings for managerial jobs because of the lack of fit (Heilman & Saruwatari, 1979; Heilman & Stopeck, 1985). Banchefsky, Westfall, Park and Judd (2016) found that feminine appearance affected career judgments for women scientists: increasing femininity decreased the perceived likelihood of being a scientist and increased the perceived likelihood of being an early childhood educator.

Confirming the "beauty is beastly" effect, Johnson et al. (2010) found in two studies that attractiveness can be detrimental for women who apply for male-typed jobs for which physical appearance is perceived as unimportant. In summary, many researches confirm that, for managerial jobs, beautiful woman would be disadvantaged (Heilman & Saruwatari, 1979; Heilman & Stopeck, 1985; Johnson et al., 2010). However, other studies (Desrumaux & Pohl, 2014; Jawahar & Mattson, 2005) did not find these results. Based on this discussion, we expected that the attractiveness bias would be influenced by sex bias and job sex-typing.

Hypothesis 2: Among attractive applicants, women will obtain the lower ratings for the male-typed job but the higher ratings for the female-typed job. Attractive male applicants will not be distinguished whatever the job's sex-type.

Attractiveness and aptitudes

Bendick and Nunes (2012) maintained that testing could change employers' behaviors and reduce bias, and indeed, knowledge of applicants' aptitudes or experience can influence judgments or hirability ratings (Desrumaux et al., 2009; Desrumaux & Pohl, 2014). However, studies on

biases have often failed to include validated variables such as the applicant's aptitudes. In a study including attractiveness and GMA, it was shown that GMA strongly influenced hiring decisions (Tews et al., 2009). However, no studies on hiring decisions, have included aptitude or GMA as an independent variable in a design that also takes into account attractiveness, gender and job sex-type. Yet several studies (e.g., Eagly, Ashmore, Makhijani & Longo, 1991) have shown that it is chiefly when the dependent variables describe social dimensions (e.g. sociability, popularity, extraversion) that physically attractive people are rated more favorably than less attractive ones; when the features are work-related (skillful, hardworking), physical attractiveness is much less determinative.

Hypothesis 3: Recruiters will strongly favor attractiveness when the applicant's aptitudes are weak.

METHOD

Participants

Participants were 58 recruiters from Paris and Northern France between the ages of 29 and 58 (M age = 33.13, SD = 9.94). They were working in recruitment offices or in in-house recruitment services of enterprises and were professionally experienced (M years = 6.1, SD = 6.13). 35 were working in enterprises as company recruiters (including 6 in public enterprises and 29 in private enterprises) and 14 were working in-office recruiters, 9 recruiters in Information Technologies Services Companies). They were trained in human resources (27), psychology (15), commerce (8), law (6), finance and bank (2). They were randomly assigned to two equal groups. One group (10 men and 19 women) rated applicants for a managerial job that was male sex-typed (medical doctor-surgeon). The other group (12 men and 17 women) rated applicants for a managerial job that was female sex-typed (medical doctor-nutritionist).

Materials

– *Photographs (facial attractiveness)*

Sixty-nine students and workers at various jobs (men and women, age range 21 to 67 years, M = 33.86, SD = 12.51) were asked to rate the attractiveness of people shown in photographs who (1) were White; (2) were 25-30 years old; (3) were not wearing glasses; (4) had a face of average size and shape; (5) were smiling; (6) were clean shaven.

The participants rated 60 men's and 48 women's photographs on a scale ranging from 1 (*not at all attractive*) to 9 (*very attractive*). Based on these ratings, eight photographs (*four men and four women*) were selected for the male sex-typed job and eight photographs (*four men and four women*) were selected for the female sex-typed job.

For each job sex-type and each gender, two attractive photographs and two unattractive photographs were chosen.

Three analyses of attractiveness were conducted on the men's photographs: attractive men's photographs were not significantly different from one another, $F_{(3,\ 204)} = .17$, *ns*; unattractive men's photographs also did not differ from one another, $F_{(3,\ 204)} = 1.82$, *ns*; but as required, attractive and unattractive men's photographs differed significantly, $F_{(1,\ 68)} = 57.52$, $p<.001$. The same three analyses were conducted on the women's photographs: attractive women's photographs did not differ from one another, $F_{(3,\ 204)} = .26$, *ns*; nor did unattractive ones, $F_{(3,\ 204)} = .31$, *ns*; but as required, attractive and unattractive women's photographs differed significantly, $F_{(1,\ 68)} = 177.25$, $p<.001$. The last analysis yielded no difference between the photographs of men and women for attractive and unattractive photographs, $F_{(1,\ 68)} = .88$, *ns* and no significant interaction between gender and attractiveness, $F_{(1,\ 68)} = .01$, *ns*. The same materials were used for the two groups.

Finally, attractiveness averages of the four photographs of attractive men were M = 5.40, SD = 1.96; M = 5.39, SD = 1.88; M = 5.38, SD = 1.92 and M = 5.25, SD = 1.85; of the four photographs of unattractive men were M = 2.81, SD = 2.09; M = 3.13, SD = 1.97; M = 3.13, SD = 1.78 and M = 3.19, SD = 2.22; of the four photographs of attractive women were M = 5.54, SD = 1.64; M = 5.42, SD = 1.86; M = 5.49, SD = 1.89 and M = 5.65, SD = 1.60; and of the four photographs of unattractive women were M = 3.33, SD = 1.56; M = 3.20, SD = 1.75; M = 3.35, SD = 1.53 and M = 3.19, SD = 1.70.

– *Jobs*

Seventy-two participants (36 men and 36 women) pursuing various training and occupational jobs, aged 20 to 67 years (M = 31.92, SD = 11.38) rated 107 jobs on a Likert-type scale ranging from 1 (entirely female) to 9 (entirely

male). These jobs were related to six sectors (social, medical, insurance/banking, services, production/industry and art) and concerned non-managerial and managerial jobs. The only information given about each job was its name.

Two jobs in the medical field were chosen: one managerial male sex-typed (Medical Doctor Surgeon) (M = 6.35, SD = 1.40) and one managerial female sex-typed (Medical Doctor Nutritionist) (M = 3.97, SD = 1.32). In regard to ratings of the sex-type of the job, the male-typed necessarily differed significantly from the female-typed, $F_{(1, 71)} = 86.40$, $p<.001$.

– *Vignettes submitted to recruiters*

Each application comprised one CV that included one color photograph and the results of an intelligence test (high aptitude or middle aptitude). In the CV, the information always included the training and the diploma. Only the city and kind of hospital changed. Occupational experiences were similar. For example, for the surgeon job, all the applicants were surgeons who had finished their medical training and their surgical internship (12 years total) and had been working in their field for three years.

Dependent variables

The dependent variables were nine scales measuring perceived hirability, perceived experience, perceived competence (together measuring hirability), dynamism, intelligence and hardworking character (together measuring utility) and sympathy, honesty, agreeableness (together measuring desirability). In addition, the 9 scores were collapsed to yield a single "favorableness" score.

Procedure and design

Experimentators met the recruiters in their companies or offices. The recruiters did not come to the laboratory and weren't paid. They had to rate applicants for either a surgeon job or a medical doctor nutritionist job. Recruiters were randomly assigned to two groups. One group rated eight CVs for the surgeon job (male sex-typed job). The other group rated eight CVs for the medical doctor nutritionist job (female sex-typed job). Recruiters examined 8 CVs with three changing characteristics (the applicant's gender, physical appearance and aptitude. They rated eight hypothetical applicants based on their resume, which was varied according to a 2×2×2 design including three within-participants variables (gender × attractiveness × high/moderate aptitude) and two between-participants variable (male/female job sex-type; male/female recruiter). The three within-subjects factors were precisely: applicants' gender (male *vs* female), physical appearance (attractive *vs* unattractive) and aptitude (high *vs* moderate). For each job, eight resumes were generated that varied according to the 2×2×2 within-subjects design. On one hand, the photographs of attractive men and woman and the photographs of unattractive ones, were rotated across the various conditions (high aptitude/middle aptitude). Recruiters had to rate each of the eight applicants on all 9 scales. For each scale, they put a cross on a 10-cm analog scale anchored by "0 = not at all" and "10 = entirely". Each scale was given a numeric score by counting the number of centimeters and millimeters from "not at all" to judge's cross mark and converted to numbers (in centimeters and with two decimals). The final DV was a global rating combining all 9 scales (max. score = 90).

Two documents were used: one described the job to be filled (job description) and the other described the applicant (resume). The two job descriptions of medical doctors, one for a surgeon and one for a doctor nutritionist, briefly presented the hospital, the tasks, and the activities to be performed. The fictitious applicants were described via their resumes. Each resume included standard information such as the applicant's age, marital status (unmarried), interests, level of education, work experience and a photograph of the applicant's face. These characteristics were essentially the same for each job sex-type. The amount of education (twelve years of training in the faculty of medicine and the degree were the same (only the city where the applicant obtained the degree changed). Work experience was the same. Resumes were rotated and counterbalanced. The photographs (of the same level of attractiveness) were also rotated and counterbalanced across the various conditions.

In order to manipulate the aptitude level, the recruiters were informed of the results of a GMA test. The GMA test was the *DAT-5* (*Differential Aptitude Tests*), which measured verbal, spatial, and numeric abilities. As Schmidt and Hunter (2004) showed, general mental ability tests are among the best predictors of performance. The resume explained the aptitude scores and rated the applicant's results as showing either moderate or high general ability.

One group of recruiters rated the applicants for the male sex-typed managerial job, the other group rated those for the female sex-typed managerial job. The recruiter was asked to first read the job description for which the eight applicants were to be rated. Then, the recruiter read the 8 resumes relating to the job. After reading each resume, the participant rated it on each of the nine scales using the 10 cm analog scale anchored at the low end with " 0 = not at all" and at the high end with "10 = entirely". For each job, the presentation order of the 8 resumes was counterbalanced. The recruiter's gender was not included as a factor but its effect was measured and controlled.

RESULTS

In a preliminary analysis, we examined the descriptive data (see Table 1 and Table 2), and in a second analysis, we tested hypotheses with a variance analysis with repeated measurements. Statistical analyses were computed with Statistica 12 software.

Descriptive analysis

In order to assess the relationships among the three dimensions (hirability, utility, desirability), a correlation matrix was drawn up (see Table 1). The recruiters provided the scale ratings (see Table 2).

The correlations between the scales were mostly significant. Out of 36 tested correlations, 29 were significant and all went in the expected direction. The seven non-significant correlations related to the adjective "experienced". The adjective experienced was only significantly related to the adjective "hirable". A psychometric analysis indicated a satisfactory reliability coefficient (Cronbach's Alpha = .97) which means that all scales contributed to measuring the same positive/negative judgment factor. The analysis dealt with the overall "favorableness" rating. The probability of getting the job was measured with 9 adjectives: 3 for hirability ("hirable", "experienced", "competent") (Cronbach's Alpha = .90), 3 for desirability ("sympathetic", "honest" and "agreeable") (Cronbach's Alpha = .93) and 3 for utility ("dynamic", "intelligent" and "hard-working" (Cronbach's Alpha = .93) (see Table 2). All these scales were summed and a univariate, repeated measures analysis was conducted on the composite score to determine the effects of the applicant's perceived attractiveness, gender and aptitude and the job's sex-type on the composite "favorableness" score.

Subscale ratings of favorableness

For each applicant profile (eight vignettes), means and standard deviations are presented in Table 2.

Test of hypotheses: variance analysis with repeated measurements

The variance analysis with repeated measurements (see Table 3 and Table 4) showed significant main effects for the applicant's attractiveness, $F_{(1, 54)} = 97.74$, $\eta^2 = .99$, $p<.001$ and aptitude, $F_{(1, 54)} = 34.74$, $\eta^2 = .97$, $p<.001$). Attractive applicants received higher ratings than unattractive ones, and highly able applicants were rated as more suitable for hiring than moderately able ones. There was no significant main effects for the applicant's gender, $F_{(1, 54)} = .05$, *ns*, for the job sex-type, $F_{(1, 54)} = .14$, *ns*, and for recruiters' gender, $F_{(1, 54)} = .39$, *ns*. In order to test Hypothesis 1, which proposes that attractive applicants will have higher ratings than unattractive ones, we examined the main effect of attractiveness on favorableness. Hypothesis 1 was confirmed. Attractive applicants were rated higher than unattractive ones for managerial jobs.

Next, we tested Hypothesis 2, which states that attractive women applicants will obtain the lowest ratings for the male sex-typed job but will obtain the highest ratings for the female sex-typed job. Attractive male applicants will not be distinguished whatever the job sex-type. This hypothesized interaction was tested by examining the three way interaction between applicant's gender, applicant's attractiveness, and job sex-type The triple interaction was significant, $F_{(1, 54)} = 7.68$, $\eta^2 = .88$, $p<.01$. Attractiveness did not help women who were applying for the female sex-typed job. But for non-attractive applicants, women were advantaged over men for female sex-typed jobs, and men were advantaged over women for male sex-typed jobs. Hypothesis 2 was not supported. To test Hypothesis 3, we examined the interaction between attractiveness and aptitude. The interaction between aptitude and attractiveness was not statistically significant, $F_{(1, 54)} = 1.99$, *ns*. Therefore, Hypothesis 3 was not confirmed.

Table 1 – Between-item correlation matrix for the 9 scales

	Hirable	Experienced	Competent	Sympathic	Agreable	Honest	Intelligent	Hard-working	Dynamic
Experienced	.19*								
Competent	.77*	.06							
Sympathic	.74*	.01	.77*						
Agreable	.64*	−.05	.60*	.83*					
Honest	.70*	−.00	.66*	.79*	.79*				
Intelligent	.72*	−.06	.76*	.80*	.77*	.74*			
Hard-working	.75*	.05	.88*	.77*	.62*	.68*	.82*		
Dynamic	.62*	.02	.56*	.82*	.78*	.73*	.77*	.64*	
M	6.17	6.22	6.33	6.30	6.29	6.39	6.67	6.61	6.36
SD	.92	.40	1.08	1.14	1.18	1.09	1.10	1.01	.99
Cronbach's Alpha	.74	.84	.81	.89	.86	.80	.88	.82	.84
Asymmetry	.22	.01	.28	.55	.58	.16	.62	.53	.44
Flattening	−.35	−1.31	−.06	.67	.27	−.42	−.01	.01	.18

Note. $N = 58$; * $p<.05$.

Table 2 – Means and standard deviations of favorableness ratings for male typed job/female typed job and managerial male typed job/female typed job

	Managerial female sex-type		Managerial male sex-type		Sum	
	M	**SD**	**M**	**SD**	**M**	**SD**
Men						
Attractive highly apt	7.20	.89	7.20	1.03	7.20	.96
Attractive moderately apt	6.21	1.57	6.47	1.06	6.34	1.34
Unattractive highly apt	6.40	1.11	6.60	1.04	6.50	1.07
Unattractive moderately apt	5.53	1.53	5.61	1.14	5.57	1.34
Women						
Attractive highly apt	7.18	.92	7.14	1.08	7.16	1.00
Attractive moderately apt	6.28	1.36	6.30	1.10	6.29	1.23
Unattractive highly apt	6.76	1.07	6.27	1.21	6.52	1.16
Unattractive moderately apt	5.87	1.39	5.18	1.20	5.52	1.33

Note. The higher the ratings, the more favorable is the judgment.

Table 3 – Repeated measures variance analysis for favorableness score (9 scales)

	df	MC	df error	MC error	F	p
Recruiters' gender	1	2.83	54	7.13	.39	.53
Attractiveness	1	48.58	54	.46	97.74***	.001
Applicant gender	1	.03	54	.57	.05	.82
Applicant aptitude	1	86.43	54	2.49	34.74***	.001
Job sex-type	1	1.05	54	7.13	.14	.70
Attractiveness × Aptitude	1	.49	54	.24	1.99	.16
Applicant gender × Attractiveness × Job sex-type	1	2.11	54	.28	7.68**	.007

Legenda. df = degree of freedom.
Note. ** $p<.01$, *** $p<.001$

Table 4 – Multiple variance analysis with repeated measurements for favorableness score (all calculations)

	SC	df	MC	F	p
Ord. Orig.	17609.42	1	17609.42	2471.468	.000000
Recruiters' gender	2.83	1	2.83	.397	.531283
Job sex-type	1.05	1	1.05	.147	.702938
Recruiters' gender*Job sex-type	.04	1	.04	.005	.943112
Error	384.75	54	7.13		
S	.03	1	.03	.050	.824212
S*Recruiters' gender	.18	1	.18	.319	.574275
S*Job sex-type	3.97	1	3.97	6.922	.011072
S*Recruiters' gender*Job sex-type	1.12	1	1.12	1.952	.168035
Error	30.96	54	.57		
A	48.58	1	48.58	97.749	.000000
A*Recruiters' gender	3.98	1	3.98	8.006	.006531
A*Job sex-type	1.47	1	1.47	2.950	.091587
A*Recruiters' gender*Job sex-type	.45	1	.45	.907	.345252
Error	26.84	54	.50		
C	86.43	1	86.43	34.747	.000000
C*Recruiters' gender	.57	1	.57	.229	.634507
C*Job sex-type	.03	1	.03	.010	.919421
C*Recruiters' gender*Job sex-type	.23	1	.23	.092	.762284
Error	134.31	54	2.49		
S*A	.06	1	.06	.234	.630331
S*A*Recruiters' gender	.12	1	.12	.438	.511068
S*A*Job sex-type	.11	1	2.11	7.680	.007643
S*A*Recruiters' gender*Job sex-type	.06	1	.06	.209	.649413
Error	14.85	54	.28		

continued on next page

continued

	SC	df	MC	F	p
S*C	.02	1	.02	.199	.657615
S*C*Recruiters' gender	.15	1	.15	1.526	.222118
S*C*Job sex-type	.16	1	.16	1.633	.206789
S*C*Recruiters' gender*Job sex-type	.08	1	.08	.845	.362198
Error	5.41	54	.10		
A*C	.49	1	.49	1.990	.164045
A*C*Recruiters' gender	.47	1	.47	1.940	.169328
A*C*Job sex-type	.82	1	.82	3.350	.072711
A*C*Recruiters' gender*Job sex-type	.03	1	.03	.140	.710095
Error	13.20	54	.24		
S*A*C	.00	1	.00	.028	.868614
S*A*C*Recruiters' gender	.02	1	.02	.109	.742155
S*A*C*Job sex-type	.07	1	.07	.418	.520446
S*A*C*Recruiters' gender*Job sex-type	.21	1	.21	1.205	.277148
Error	9.23	54	.17		

Legenda. df = degree of freedom; S = applicant sex; A = attractiveness; C = aptitude.

DISCUSSION

This study dealt with the effects of attractiveness, gender, job sex-type, and aptitude for medical jobs. Previous studies have always concerned commercial or financial areas, human relations (receptionist), or technical jobs (accountant) but no studies have dealt with the differential effects of physical attractiveness, gender, and job sex-type in the context of the caring professions. Contrary to many studies (measuring students' judgments), we measured ratings by experienced decision-makers or HRM (human resource management) specialists, which certainly improves the external validity of this kind of study. Many studies concerning the effects of attractiveness and gender on hiring decisions use ecologically dubious experimental designs (for example, in some studies recruiters rate only one applicant profile for a job; in others, they rate one profile for several different jobs). The present study aimed at assessing the suitability of applicants for two different managerial jobs within a more realistic design.

Despite having given aptitude tests results about the applicants, the study showed that hiring remained significantly vulnerable to bias. Our results confirmed the

attractiveness effect (H1) predictable from previous studies (Desrumaux et al., 2009; Desrumaux & Pohl, 2014; Hosoda et al., 2003; Jawahar & Mattson, 2005; Marlowe et al., 1996; Ruffle & Shtudiner, 2015). Attractiveness had a strong effect and plays an important role in people's judgments of others on numerous traits linked to people's desirability and utility. The fact that attractive managers in the medical field are preferred to unattractive ones seems to result because attractiveness in managers exerts an influence on the trust generated in them (Guinalíu & Jordán, 2016). This study did not find that attractiveness was more beneficial for women applying for female sex-typed jobs than male sex-typed jobs. This negative result was obtained previously (Desrumaux, 2005; Desrumaux & Pohl, 2014). Thus, the attractiveness effects predicted by Heilman's model were not found, but recall that in accordance with the lack of fit model, attractive women would be discriminated against for male sex-typed jobs and unattractive women would be preferred over attractive ones for those jobs. These results invite to test Heilman's lack of fit model. A meta-analysis by Hosoda et al. (2003) of 27 studies testing Heilman's model predicts interactions between applicant's gender and attractiveness. Theory of beauty as a predominant factor has shown that attractive applicants are rated more favorably independently of gender and the nature of the job. More precisely, studies measuring conjugating effects of applicants' appearances and gender (Desrumaux, 2005, 2011; Desrumaux et al., 2009) didn't show a rejection of attractive woman for managerial jobs: the more applicants were perceived as attractive, the more they were considered as hirable and competent. Data obtained by Drogosz and Levy (1996), Jawahar and Mattson (2005) and Hosoda et al. (2003) imply that the attractiveness bias is more salient today than the gender bias. Finally, attractive applicants were perceived here as more suitable for hiring, more useful, and more desirable. Attractiveness increased not only the chances of getting a job but interacted with many other variables.

Limitations

This study has some limitations that need to be addressed here. First, the sample of recruiters was relatively small. The fact that we collected the judgments of HRM specialists or experienced recruiters was an added value for this study, but it was difficult to obtain their participation. Moreover, even though we directly surveyed recruiters or HRM specialists, the situation still didn't precisely model a real-life hiring situation. Second, the attractiveness manipulation was limited to a photograph of the face. Yet, physical appearance is multidimensional. Besides, this study had neutralized other sub-dimensions of appearance which could be interesting, such as age, race, weight (for a review see Pohl & Desrumaux, 2014) or size. For example, a study by Grant and Mizzi (2014) revealed that an overweight applicant was rated significantly higher on the obesity stereotype, significantly lower on the physical attractiveness stereotype, and significantly less employable. Regardless of attractiveness, what will become of an applicant who is obese or older? Another question relates to the stability of one's appearance. In many studies, impressions are assumed to be based on stable characteristics of faces (femininity, masculinity, symmetry…), but facial cues are probably dynamic and malleable. For example, facial cues of sleep deprivation have been shown to negatively affect perceptions of attractiveness and health (Axelsson et al., 2010). Yet, a number of more malleable characteristics have been shown to affect judgments of beauty. Facial markers such as subtle changes of mouth curvature and eyelid openness might also have important influences on perceived attractiveness and intelligence (Talamas et al., 2016). These variables may have subtle but measurable determining effects on hiring decisions.

Implications for research and practice

A future research problem will be to determine whether recruiters are aware of the probable influences of appearance on their judgments. Few studies have explored the question of the awareness of the role played by physical appearance on hiring decisions. An associated question is whether attractiveness is "subconsciously" integrated with certain qualities typical of the job or well-suited to it. Past studies have consistently shown that the gender typicality of applicants' faces affects hiring decisions for leadership positions irrespective of applicants' gender (Sczesny, Spreemann & Stahlberg, 2006). Von Stockhausen, Koeser and Sczesny (2013) found that a match between masculine or feminine facial appearance and the gender typicality of the job affected all dependent measures of hiring decisions. In line with congruity theory (Eagly & Karau, 2002) and the lack-of-fit model (Heilman, 1983), they found that employment of masculine-looking applicants for a male-typed job was more

likely than employment of feminine-looking ones, whereas feminine-looking applicants were preferred over masculine-looking ones for a female-typed job. Being aware of biasing influences is very important, and recruiters need to receive training about bias and hiring based on valid tests. Even if an attractiveness bias operates, testing could improve guidance for employers on anti-bias efforts. Indeed, the bias effect is stronger when recruiters lack certain information about applicants. Despite training programs aimed at avoiding bias, a last question concerns changes: "Will being aware of the attractiveness effect persuade recruiters to change their decision processes?". Bendick and Nunes (2012) underlined the difficulties that stigmatized groups face when attempting to mitigate the adverse effects of negative stereotypes. For example, when an individual performs in a way that is inconsistent with a stereotype, that performance gets discounted as reflecting exceptional circumstances such as luck (Swim & Sanna, 1996). Moreover, once the recruiters are convinced that it is important to have anti-bias procedures, it is difficult for them to convince partners (employers) that attractiveness is not a warranty of performance. Being fully aware of biases that may sway one's decision from choosing one applicant over another is a challenge. These biases may arise at any stage of employment, but are generally more pronounced when minimal information is known about the individual (Desrumaux & Pohl, 2014), and may be the case when investigating potential job candidates through Internet networking sites.

References

AHEARNE, M., GRUEN, T. & BURKE-JARVIS, C. (1999). If looks could sell: Moderation and mediation of the attractiveness effect on salesperson performance. *International Journal of Research in Marketing*, *16*, 269-284. doi:10.1016/S0167-8116(99)00014-2

AXELSSON, J., SUNDELIN, T., INGRE, M., VAN SOMEREN, E.J.W., OLSSON, A. & LEKANDER, M. (2010). Beauty sleep: Experimental study on the perceived health and attractiveness of sleep deprived people. *British Medical Journal*, *341*, 1-5. doi10.1136/bmj.c6614

BAERT, S. (2018). Facebook profile picture appearance affects recruiters' first hiring decisions. *New Media & Society*, *20* (3), 1220-1239. doi:10.1037/t07016-000

BAERT, S. & DECUYPERE, L. (2014). Better sexy than flexy? A lab experiment assessing the impact of perceived attractiveness and personality traits on hiring decisions. *Applied Economics Letters*, *21* (9), 597-601. doi:10.1080/13504851.2013.877564

BANCHEFSKY, S., WESTFALL, J., PARK, B. & JUDD, C.M. (2016). But you don't look like a scientist! Women scientists with feminine appearance are deemed less likely to be scientists. *Sex Roles*, 1-15. doi:10.1007/s11199-016-0586-1

BENDICK, M. JR. & NUNES, A. (2012). Developing the research basis for controlling bias in hiring. *Journal of Social Issues*, *68* (2), 238-262. doi:10.1111/j.1540-4560.2011.01747.x

BERSCHEID, E. & WALSTER, E. (1974). Physical attractiveness. *Advances in Experimental Social Psychology*, *7*, 157-215. doi:10.1016/S0065-2601(08)60037-4

BOSAK, J., SCZESNY, S. & EAGLY, A.H. (2008). Communion and agency judgments of women and men as a function of role information and response format. *European Journal of Social Psychology*, *38*, 1148-1155. doi:10.1002/ejsp.538

BRAUN, S., PEUS, C. & FREY, D. (2012). Is beauty beastly? Gender-specific effects of leader attractiveness and leadership style on followers' trust and loyalty. *Zeitschrift für Psychologie*, *220*, 98-108. doi:10.1027/2151-2604/a000101

DESRUMAUX, P. (2005). Informations normatives et stéréotypiques: Effets de l'internalité/externalité, du genre, de l'apparence physique et du type hiérarchique et sexuel du poste sur les décisions de recrutement. [Normative and stereotypic pieces of information: Effects of internality/externality, gender, physical appearance, and position level and sex-type of the job on hiring decisions]. *International Review of Social Psychology*, *18*, 165-199.

DESRUMAUX, P., DE BOSSCHER, S. & LÉONI, V. (2009). The effects of facial attractiveness, gender, and aptitude of applicants on utility, desirability, and hirability. *Swiss Journal of Psychology*, *68*, 33-42. doi:10.1024/1421-0185.68.1.33

DESRUMAUX, P. & POHL, S. (2014). Juger la recrutabilité des candidats: Quels effets de l'apparence et des aptitudes en fonction des types de postes? [Judging hirability of applicants: What effects of appearance, aptitudes with regard to the kind of jobs]. *Psychologie Française*, doi.10.1016/j.psfr.2013.12.001

DESRUMAUX-ZAGRODNICKI, P., LEONI, V. & MASCLET, G. (2003). Recrutement, internalité/externalité, apparence physique de candidats masculins et type de poste. [Recruiting, internality/externality, physical appearance of male applicants and kind of position]. *Cahiers Internationaux de Psychologie Sociale*, *59*, 30-39.

DION, K.K., BERSCHEID, E. & WALSTER, E. (1972). What is beautiful is good. *Journal of Personality and Social Psychology*, *24*, 285-290. doi:10.1037/h0033731

DROGOSZ, L.M. & LEVY, P.E. (1996). Another look at the effects of appearance, gender, and job type on performance-based decisions. *Psychology of Women Quarterly*, *20*, 437-445. doi:10.1111/j.1471-6402.1996.tb00310.x

EAGLY, A.H., ASHMORE, R.D., MAKHIJANI, M.G. & LONGO, L.C. (1991). What is beautiful is good, but... A meta-analytic review of research on the physical attractiveness stereotype. *Psychological Bulletin*, *110*, 109-128. doi:10.1037/0033-2909.110.1.109

EAGLY, A.H. & KARAU, S.J. (2002). Role congruity theory of prejudice toward female leaders. *Psychological Review*, *109*, 573-598. doi:10.1037//0033-295x.109.3.573

FRUHEN, L.S., WATKINS, C.D. & JONES, B.C. (2015). Perceptions of facial dominance, trustworthiness and attractiveness predict managerial pay awards in experimental tasks. *The Leadership Quarterly*, *26*, 1005-1016. doi.org/10.1016/j.leaqua.2015.07.001

GILLEN, B. & SHERMAN, R.C. (1980). Physical attractiveness and sex as determinants of trait attributions. *Multivariate Behavioral Research*, *15* (4), 423-437. doi.org/10.1207/s15327906mbr1504_3

GORMAN, E.H. (2005). Gender stereotypes, same-gender preferences, and organizational variation in the hiring of women: Evidence from law firms. *American Sociological Review*, *70*, 702-728. doi.org/10.1177/000312240507000408

GRANT, S. & MIZZI, T. (2014). Body weight bias in hiring decisions: Identifying explanatory mechanisms. *Social Behavior and Personality: An International Journal*, *42*, 353-370. doi.org/10.2224/sbp.2014.42.3.353

GUINALIU, M. & JORDAN, P. (2016). Building trust in the leader of virtual work team. *Spanish Journal of Marketing - ESIC*, *20*, 58-70, doi:10.1016/j.reimke.2016.01.003

HEILMAN, M.E. (1983). Sex bias in work settings: The lack of fit model. *Research in Organizational Behavior*, *5*, 269-298. http://www.elsevier.com/locate/riob

HEILMAN, M.E. (2012). Gender stereotypes and workplace bias. *Research in Organizational Behavior*, *32*, 113-135. doi:10.1016/j.riob.2012.11.003

HEILMAN, M.E., BLOCK, C.J., MARTELL, R.F. & SIMON, M.C. (1989). Has anything changed? Current characterizations of men, women and managers. *Journal of Applied Psychology*, *74*, 935-942. doi:74/6/935

HEILMAN, M.E. & EAGLY, A.H. (2008). Gender stereotypes are alive, well, and busy producing workplace discrimination. *Industrial and Organizational Psychology*, *1*, 393-398. doi:10.1111/j.1754-9434.2008.00072.x

HEILMAN, M.E. & SARUWATARI, L.R. (1979). When beauty is beastly: The effects of appearance and sex on evaluations of job applicants for managerial and non-managerial jobs. *Organizational Behavior and Human Performance*, *23*, 360-372. doi:10.1016/0020-5073(79)90003-5

HEILMAN, M.E. & STOPECK, M.H. (1985). Being attractive: Advantage and disadvantage? Performance based evaluations and recommended personnel actions as a function of appearance, sex and job type. *Organizational Behavior and Human Performance*, *35*, 202-215. doi:10.1016/0749-5978(85)90035-4

HOSODA, M., STONE-ROMERO, E.F. & COATS, G. (2003). The effects of physical attractiveness on job-related outcomes: A meta-analysis of experimental studies. *Personnel Psychology*, *56*, 431-462. doi10.1111/j.1744-6570.2003.tb00157.x

JACKSON, L.A., HUNTER, J.E. & HODGE, C.N. (1995). Physical attractiveness and intellectual competence: A meta-analytic review. *Social Psychology Quarterly*, *58*, 108-122. doi:10.2307/2787149

JAWAHAR, I.M. & MATTSON, J. (2005). Sexism and beautyism effects in selection as function of self-monitoring level of decision maker. *Journal of Applied Psychology*, *90*, 563-573. doi:10.1037/0021-9010.90.3.563

JOHNSON, S.K., PODRATZ, K.E, DIPBOYE, R.L. & GIBBONS, E. (2010). Physical attractiveness biases in ratings of employment suitability: Tracking down the "beauty is beastly" effect. *Journal of Social Psychology, 150*, 301-318. doi:10.1080/00224540903365414

LEE, S., PITESA, M., PILLUTLA, M. & THAU, S. (2015). When beauty helps and when it hurts: An organizational context model of attractiveness discrimination in selection decisions. *Organizational Behavior and Human Decision Processes*, *128*, 15-28. doi.org/10.1016/j.obhdp.2015.02.003

MARLOWE, C.M., SCHNEIDER, S.L. & NELSON, C.E. (1996). Gender and attractiveness biases in hiring decisions: Are more experienced managers less biased? *Journal of Applied Psychology*, *81*, 11-21. doi:10.1037/0021-9010.81.1.11

NDOBO, A. (2014). Attractiveness effect and the hidden discourse of discrimination in recruitment: The moderating role of job types and gender of applicants. *International Review of Social Psychology*, *27*, 127-144. https://www.cairn.info/revue-internationale-de-psychologie-sociale-2014-1-page-127.htm

POHL, S. & DESRUMAUX, P. (2014). L'influence des stéréotypes de beauté et liés à l'obésité sur le processus de recrutement. In S. Pohl & O. Klein (Eds.), *Stéréotypes et préjugés au travail des processus aux conséquences*. Paris: L'harmattan.

PRZYGODZKI-LIONET, N., JANSSEN, O. & DESRUMAUX, P. (2010). Effects of internality, physical attractiveness and gender on hiring decisions. *Studia Psychologica*, *52*, 53-57.

RUFFLE, B.J. & SHTUDINER, Z. (2015). Are good-looking people more employable? *Management Science*, *61* (8), 1760-1776. doi:10.1287/mnsc.2014.1927

SCHMIDT, F.L. & HUNTER, J.E. (2004). General mental ability in the world of work: Occupational attainment and job performance. *Journal of Personality and Social Psychology*, *86*, 162-173. doi.org/10.1037/0022-3514.86.1.162

SCZESNY, S., SPREEMANN, S. & STAHLBERG, D. (2006). Masculine = competent? Physical appearance and sex as sources of gender-stereotypic attributions. *Swiss Journal of Psychology*, *65*, 15-23. doi.org/10.1024/1421-0185.65.1.15

SWIM, J.K. & SANNA, L.J. (1996). He's skilled, she's lucky: A meta-analysis of observers' attributions for women's and men's successes and failures. *Personality and Social Psychology Bulletin*, *22*, 507-519. doi:10.1177/0146167296225008

TALAMAS, S.N., MAVOR, K.I., AXELSSON, J., SUNDELIN, T. & PERRETT, D.I. (2016). Eyelid-openness and mouth curvature influence perceived intelligence beyond attractiveness. *Journal of Experimental Psychology General*, *145*, 603-620. doi:10.1037/xge0000152

TALAMAS, S.N., MAVOR, K.I. & PERRETT, D.I. (2016). Blinded by beauty: Attractiveness bias and accurate perceptions of academic performance. *PLoS ONE*, *11* (2). doi:10.1371/journal.pone.0148284

TEWS, M.J., STAFFORD, T.K. & ZHU, J. (2009). Beauty revisited: The impact of attractiveness, ability, and personality in the assessment of employment suitability. *International Journal of Selection and Assessment*, *17*, 94-100. doi:10.1111/j.1468-2389.2009.00454.x

von STOCKHAUSEN, L., KOESER, S. & SCZESNY, S. (2013). The gender typicality of faces and its impact on visual processing and on hiring decisions. *Experimental Psychology*, *60* (6), 444-452. doi.org/10.1027/1618-3169/a000217

WELLE, B. & HEILMAN, M.E. (2007). Formal and informal discrimination against women at work: The role of gender stereotypes. In S.W. Gilliland, D.D. Steiner & D.P. Skarlicki (Eds.), *Managing social and ethical issues in organizations*. Greenwich: Information Age Publishing.