# Mutual Interaction of Gender and Age Bias in Hiring Decisions

Yiyuan Yang\*

The Affiliated High School of Peking University, Haidian, Beijing 100080, China Corresponding author Email: yangyiyuan2023@i.pkuschool.edu.cn

#### ABSTRACT

In this work, age and gender bias in hiring and job discrimination are discussed, studies of the possible effects of ingroup bias also be included. The research was conducted by means of an experiment in which participants were selected through opportunity sampling. The experiment simulated a work environment for the participants and collected data through attitude & stereotype questionnaire and IAT method. The results of the experiment include the degree of influence of each of the two factors gender and age. The purpose of this paper is to investigate the effect of gender and age on hiring bias and to help solve the problem of discrimination in hiring.

Keywords: Hiring bias, Gender bias, Age bias

# 1. INTRODUCTION

#### 1.1Background

Many types of factors could form and influence people's discrimination in hiring and working, but this research will mainly be about two of them, gender and age. This review is focused on discrimination which includes gender discrimination and age discrimination, and it will also cover the ingroup bias which may also affect the making of hiring decisions.

Discrimination is the act of making unjustified distinctions between people based on the groups, classes, or other categories to which they belong or are perceived to belong. Lucas mentioned that "individuals are discriminated against if they are denied something or treated negatively only due to their belonging to a certain group and not due to their traits and/or abilities." (2009) [1] Then we can get the thing that stereotypes are "qualities perceived to be associated with particular groups or categories of people" (Schneider, 2005), while "prejudices are aversive or hostile attitudes toward a person who would inherit 'objectionable qualities ascribed to the group' he/she belongs to." [2,3]. Employment discrimination also follows this way, it is a form of discrimination based on age, race, gender, religion, national origin, physical or mental disability, sexual orientation, or gender identity by employers. This situation also foreshadows a lot of discrimination caused by controversial factors such as gender and age.

Both age and gender are subtle and strong for job discrimination. An obvious bias exists in the situation of two factors. Age discrimination is more subtle and nuanced than gender and race discrimination, due to the lack of clear definitional boundaries and the link between training, experience, and age. An Italian study found that, older people are more likely to be punished, even when people have similar characteristics.[4] For gender discrimination, women continue to experience more subtle forms of discrimination, such as having their input in groups ignored and having their performances devalued. Studies by Correll and Benard (2007) show that female job applicants are discriminated against for having children, while other males with the same situation are rewarded for it.[5]

Ingroup bias is usually a potential influence factor to many types of research since it is a kind of human nature to a large extent. Ingroup bias is a model that places members of an ingroup above an outgroup. This can be expressed in other ways, such as evaluating others, allocating resources, and many other ways, and this bias is part of social categorization. It can be divided into two groups, inner and outer, and part of the reason it happens is because we belong to the ingroup rather than the outgroup.[6] People more like the persons who are similar to themselves, and perceive other members of the group to be similar to them. Another reason is that people want to find self-identity, which manifests as a positive attitude toward our group.[7] Being a member of a group that has positive characteristics provides us with feelings



of social identity—the positive self-esteem that they get from their group memberships.

## 1.2Aims

The most primary aim of this research is to investigate how age and gender bias will interact to affect hiring decisions. Among these applicants, are the people who successfully get the job all based on their ability, or there be a group that has a higher probability of getting the job than others. During this process, this research also wants to figure out, whether subjective attitudes of the recruiters will influence age and gender discrimination among job applicants by the experiments. For example, in the internet company, human resources are preferred the young people and men. Based on this situation, whether this company will only have young applicants and they are all man, and the people who are old or women would not apply it.

#### 1.3Hypothesis

First, the overall hypothesis of the whole research is that there will be strong gender and age discrimination in hiring. More specific to say there will be a stronger bias towards gender compared to bias towards age.

The second one is that there will have particular subjective beliefs of recruiters that influence hiring decisions. For instance, participants may believe young women will have a higher tendency to leave their work to marry or to take care of their children. The left work directly leads to the change of job position. If the woman leaves for too long or does not return, it will damage the efficiency and also waste the company's cost investment on these employees. As a result, many companies are unwilling to hire women. Many of them are also believes that older workers will have more absences due to health problem or they will be slower at learning new skills. Therefore, in the concept of the company, older workers are not highly efficient and do not generate as much revenue for the company as young people. So, they will favor younger ones rather than older ones.

The third hypothesis is about the effect of Ingroup bias, assuming that the ingroup bias will influence the hiring decision. Prediction is that a strong ingroup bias will be observed in young participants for both genders. In most cases, ingroup bias is also observed in older groups for both genders, they will more prefer the ingroup members, not the outgroup, since, people more like to choose the people similar to them.

## 2. METHOD

#### 2.1Methodology

The sampling method this research takes is that Opportunity sampling. Opportunity sampling from China's human resources development programs and research conferences, including regions such as Beijing, Shanghai, and Guangzhou. Ensure greater universality, including groups from all regions and a wide range of samples. The sample size will be 120. The sample was also divided into four parts of the young male, old male, young female, and old female. For this step, assuming the young people are the age between 20-30 and old are the 40-50. The people between ages 30-40 are in a very delicate position, due to subjective factors, the judgments are quite different. In order to reduce the influence of other factors on the experiment, this part of the applicants will be chose to see first.

The type of experiment that applied in this research is a laboratory experiment. The experiment provides a mock setting of the workplace for the participants, they will see the same sets of CVs in random order. The attitude & stereotype questionnaire and IAT method are used to get the data from participants.

# 2.2Materials

Simple CVs (see Figure 1) of accountant applicants will be contained and provided to HR that participate in this research. The simple means that, it does not have distracting variables on this resume, such as the information about race and name. Moreover, all the information on the simple CV is abstract to ensure any negative attitudes will be caused by gender and age factors.

1. Applicant A, male, 23, accounting graduate, no working experience (young male, no experience but qualified)

2. Applicant B, male, 43, working as a computer programmer previously, no related working experience, no certification (old male, no experience)

3. Applicant C, female, 40, having a 4 years accounting experiment (old female, with experience)

Figure 1 simple CV

Accounting is a professional who handles bookkeeping and preparation of financial documents such as income statements, balance sheets, etc. They handle all financial information and perform various accounting responsibilities. Accountants will conduct accounting analysis, review financial statements,



documents, and other reports to ensure their accuracy, conduct daily and annual audits, review financial operations, prepare tax returns, and make recommendations in areas that require efficiency and cost savings, and provide risk analysis and prediction. The reason to choose the accountant as the applicant is that, the accountants' ability is less related to the employees' age and gender. For this position, experience does not mean the overwhelming advantage, and this position is common in all fields.

The questionnaire to evaluate participants' attitudes towards workers of different age groups and gender. The question in the questionnaire will be the scale questions as shown in Figure 2

#### \*1. How suitable do you think this applicant is for the job?

Not suitable at all	$\bigcirc$ 1	2	3	04	05	6	7	8	9	10	Very suitable
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\*2. How likely do you think applicant A will accept the work of your organization?

Very unlikely 01 02 03 04 05 06 07 08 09 010 Very likely

Figure 2 questionnaire of workers

What's more, paper will contain an IAT survey (see gender and age factors. Figure 3) to the participants of their attitudes to the

**Implicit Association Test** 

Next, you will use the 'E' and 'I' computer keys to categorize items into groups as fast as you can. These are the four groups and the items that belong to each:

Category	Items
Male	Man, Son, Father, Boy, Uncle, Grandpa, Husband, Male
Female	Mother, Wife, Aunt, Woman, Girl, Female, Grandma, Daughter
Science	Astronomy, Math, Chemistry, Physics, Biology, Geology, Engineering
Liberal Arts	History, Arts, Humanities, English, Philosophy, Music, Literature

#### **Implicit Association Test**

Next, you will use the 'E' and 'I' computer keys to categorize items into groups as fast as you can. These are the four groups and the items that belong to each:

Category	Items
Good	Joyous, Smiling, Beautiful, Glorious, Excellent, Happy, Love, Enjoy
Bad	Horrific, Yucky, Despise, Tragic, Hurtful, Humiliate, Disgust, Sadness
Old people	25 25 25 25 25 25
Young people	

Figure 3 IAT survey

#### 2.3Procedures

Step one, Participants will be divided into four groups based on age and gender. Control group will contain participants from four levels. They will get a resume without age and gender information. The data collected from this group will be used as a comparison with Hypothesis one.

Step two, participants will receive an accountant's job description, and then provide a pair of accountant's job resumes, including information about age, gender, qualifications, work experience, marital status, age, additional training and other characteristics Information such as leadership experience, other characteristics or hobbies

Step three, participants will have 45 minutes to make decisions about their resumes based on different ages, genders and characteristics.

-Experimental group: For each set of resumes, participants will answer the other 2 sets of questions (1-10 Likert scale questions) based on the final decision on who to hire.

1. "How suitable do you think this applicant is for the job?"

2. "How likely do you think applicant A will accept the work of your organization?"

-Control group: The same procedure as the experimental group, except that they answer 2 additional questions instead of 2 sets of questions, because they only evaluate one resume at a time, and only whether they will accept or reject the applicant

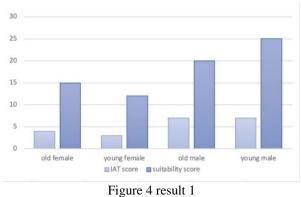
After the participants complete the task, they will receive a questionnaire to obtain their attitudes towards the personal characteristics and work abilities of the applicants of different age groups and genders. Because this research also want to investigate ingroup biases in hiring decisions, participants will complete an Implicit Association Test (IAT) of age and gender. In order to ensure fairness, half of the groups will complete the questionnaire first, and the other half will complete the IAT first.

## **3. RESULTS**

#### 3.1Result 1

The first result (see Figure 4) can support the hypothesis one that strong gender and age bias during hiring be observed. There exist a positive correlation between suitability rating and number people be accepted by company. figure one shows the order of the acceptance of each group:

young male > old male > old female > young female



# 3.2Result 2

According to the Figure 5, the lower suitability score were related with the negative attitudes to specific group. From there attitudes bias can be predicted, participants' beliefs would influence the decision.

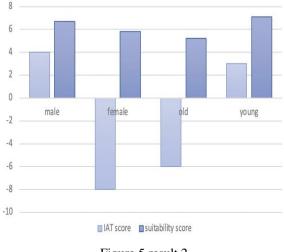
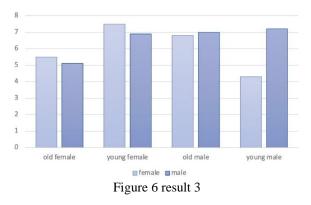


Figure 5 result 2

#### 3.3Result 3

The third result (see Figure 6) supported the hypothesis three and it divided into two parts, ingroup bias in different gender and in different age.

In both groups, observed ingroup bias, data from the figure three indicate that woman preferred woman as well as man preferred man.



For the age group, it support hypothesis of young people. From the Figure 7, we can know that young people are prefer young people more. However, in the old group, the result disproved hypothesis, the outgroup bias observed. For the male, old participants prefer young male not old male.

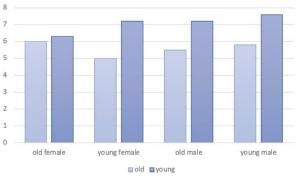


Figure 7 ingroup bias result



## 4. CONCLUSION

In this study, the results of the experiment could support 3 hypotheses and help derive acceptance order and within-group bias in recruitment. For applicants of different ages and genders, younger males are more likely to be accepted than older males, older females are more likely to be accepted than younger ones, and for older applicants, companies are more accepting of males than females. We must admit that the experiment in this work is simpler and there are many situations that cannot be simulated. It is hoped that in the future, by upgrading the experiment and adding more information about applicants to simulate a more realistic workplace environment, so that it can help to reduce the job discrimination and bias in real-life.

### REFERENCES

- Lucas, S. (2009). Theorizing Discrimination in an Era of Contested Prejudice: Discrimination in the United States (Illustrated ed.). Temple University Press, the Philadelphia.
- [2] Schneider, D. J. (2005). The Psychology of Stereotyping (Distinguished Contributions in Psychology) (1st ed.). The Guilford Press, New York.
- [3] Allport, G. W., Clark, K., & Pettigrew, T. (1979). The Nature of Prejudice: 25th Anniversary Edition (Unabridged ed.). Basic Books, New York
- [4] Dormidontova, Y., Castellani, M., & Squazzoni, F. (2020). Age Discrimination in Hiring: An Experimental Study in Italy. University of Milan.
- [5] Correll, S., Benard, S., & Paik, I. (2007). Getting a Job: Is There a Motherhood Penalty? American Journal of Sociology, 112(5), 1297–1339.
- [6] Cadinu, M. R., & Rothbart, M. (1996). Selfanchoring and differentiation processes in the minimal group setting. Journal of Personality and Social Psychology, 70(4), 661–677.
- [7] Brewer, M. B. (1979). In-group bias in the minimal intergroup situation: A cognitive-motivational analysis. Psychological Bulletin, 86(2), 307–324.