Implicit and Explicit Attitudes Towards Male Looking Females and Female Looking Males: Evidence from China

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Abstract. In many reports, it is not difficult to see that some beautiful and feminine boys have received a lot of criticism from society. We investigated whether people's attitude is biased against males wearing female-type and females wearing male-type. Thirty-five adults were included and measured their implicit and explicit attitudes. In the implicit test, we find that people tend to use less time and make fewer mistakes to associate the female wearing male-type with positive words and the male wearing female-type with negative words. Meanwhile, in the explicit survey, the data displays that Chinese people prefer females wearing male-type rather than males wearing female-type. This study explores people's attitudes towards others' dress and provides a new connection between positive and negative views and between female cross-gender wearers and male cross-gender wearers.

Keywords: Implicit Stereotypes; Explicit Stereotypes; Male-looking Females; Female-looking Males; LGBT.

1. Introduction

"Sissy" usually refers to an effeminate man dressed in women's clothes or female style (Merriam-Webster, 2021). Many people believe that "male wearing female style" is prevalent in society, and the trend is spreading rapidly among teenagers. "Little fresh meat" is a nickname given by fans to young male entertainers who have beautiful facial features and like make-up. (Https:// www. NYTimes. com/ 2019/06/12/opinion/little-fresh-meat-china.html) However, these male entertainers have been strongly criticized. For example, Xinhua News Agency condemns its so-called "sissy pants" culture as "pathological" and believes that this destructive phenomenon erodes society.[1] Here in the present study, we aim to examine whether such groups in society are experiencing prejudice and discrimination. Particularly, this study aims to investigate a relative link between positive and negative views and towards female cross-gender wearers and male cross-gender wearers.

"The Institute of Medicine commission on lesbian, gay, bisexual, and transgender (LGBT) health recognizes that the sexual minority community is diverse and that the term LGBT is often used as a blanket term" (Sabin, Riskind, and Nosek, 2015, pp1831). According to the research done by the institute of medicine commission, these groups of people have a higher risk of smoking, drinking alcohol, and even suicide (Sabin, Riskind, and Nosek, 2015). Nowadays, the problem of inequality encountered by LGBT groups is widely concerned, such as employment, education, communication, medical care, and so on. In fact, Am J public health surveyed 246 LGBT youth aged 16 to 20 and found that one-third of the participants met the diagnostic criteria for many mental disorders (Mustanski, Garofalo, and Emerson, 2010). This included 17% of participants meeting the criteria of conduct disorder, 15% of participants meeting the criteria of major depression, and 9% of participants meeting the criteria of post-traumatic stress disorder (Mustanski, Garofalo, and Emerson, 2010). In workplace, LGBT employees face prejudice due to different cultural beliefs. For example, LGBT employees will be excluded from the informal workplace so that LGBT individuals will get fewer resources to do a good job, and leaders and colleagues will offer less respect and guidance (Cech and Rothwell, 2019). Therefore, living in a society biased against LGBT, such discriminatory psychology and unequal treatment will be determined to the health of gender minorities (Sabin, Riskind and Nosek, 2010).

Among four groups of sexual minorities, a large amount of research has focused on lesbians and gays. In the 20th century, homosexuality was regarded as synonymous with gender inversion that male homosexuals were presumed to be more like women than men, whereas lesbians were presumed

to be more like men (Herek, 2000). In collecting explicit and implicit data from heterosexual providers, people always tend to be heterosexual rather than homosexual --gay and lesbian (Sabin, Riskind, and Nosek, 2015). Therefore, compared with heterosexuals, people's implicit preference for gays and lesbians is widespread.

Previous work uses exclusively explicit methods while less focusing on implicit methods. To be specific, children have more negative attitudes towards females dressing like males than males dressing like females (Qian et al., 2020). In this paper, we use the Implicit Association Test (IAT) to measure various associations of people's stereotypes towards different gender and cross-gender dressing. This method has many advantages. For example, Greenwold et al shows that the IAT program is sensitive and effective for the automatic evaluation of association through three different experiments. In addition, the IAT method can evaluate various associations, including internal stereotypes and self-concept. Even for subjects who are unwilling to express their attitude, the IAT test can still reveal their attitude (Greenwald, McGhee, and Schwartz, 1998).

Based on previous research, we expected that: (1) most people tend to associate the female wearing male-type with positive words and the male wearing female-type with negative words. (2) men take longer than women to connect the male wearing female-type with positive words and spend less time to connect the female wearing female-type with positive words.

2. Method

The subject investigated in this survey is whether people will be biased against boys who dress like girls or girls who dress like boys. In order to objectively evaluate the stereotype of the people's inner thoughts, the IAT test game was finally used to collect data. First of all, IAT can effectively and accurately evaluate people's preference for one thing, one kind of person, one type of situation and so on. Secondly, IAT can also reveal to a large extent the thoughts of subjects who are unwilling to express their attitudes.

2.1 Participants

There are a total number of 35 participants in this IAT test game. Participants are between 15-77 years old (48.57% female). 81.25% of the participants were non-religious, 12.5% Christianity, 3.125% Buddhism and 3.125% other religious. The data used in this article was collected from October 13, 2021 to October 20, 2021.

2.2 Measure and Procedure

We used a standardized IAT adapted from Greenwald et al. (1998). A 7block customized IAT test was conducted with 2 terms and 2 attribute dimensions. Firstly, participants would see18 photos of female dressed in male-type and male dressed in female-type. They needed to classify those photos by pressing "A" or "L". The second step was that participants were required to classify the words displayed on the screen to positive words and negative words. Thirdly, participants needed to further classify pictures and words according to males dressed in female-type with negative words and females dressed in male-type with positive words. The fourth step was the same as the third part, but this is the test group, which means that participants must make more choices. The fifth step was to shift the places of the pictures showed in last step on the screen and let the subjects classify those photos by judging them belong to male dressed female-type or female dressed male-type and pressing the "A" or "L" key. In the sixth step, the subjects needed to continue classifying the pictures and words according to a new rule: associate male dressed in female-type with positive words and female dressed male-type with negative words. Finally, participants had to make more choices based on the sixth step.

Data would be collected after the experiment, which includes the average time taken by the participants to answer each question and the number of wrong answers in different parts. By calculating and comparing the two sets of time and different accuracy associated with varying groups

of question, we can get the bias of participants for different genders. For example, people who dislike male dressed in female-type will spend more time linking male dressed in female-type with positive words, and there will be more errors in the process. On the contrary, this kind of people will spend less time linking male dressed in female-type with negative words with a higher accuracy.

3. Results

3.1 Descriptive Results

These section included some data that was collected through both implicit and explicit methods, and most of those data would be presented in tables and pie chart, which could help people better read and analyze those datas. The sample size consisted of 35 participants (17females) with the age range from 15.5 years old to 76.58 years old. Three participants were excluded, because these three participants did not complete the experiment, resulting in incomplete data. The implicit attitudes were measured toward a relative link between positive and negative views and between female cross-gender wearers and male cross-gender wearers. Overall, the accuracy in the IAT was 86.48%, mean error rate was 10.00% in the congruent block, and mean error rate was 86.33% in the incongruent block. Those participants' mean response time was 61691.60 millisecond, SD =1222.73. The response time ranges from 562.18 milliseconds to 7838.42 milliseconds.

3.2 Prescriptive Results

(1). Implicit attitudes towards female-looking males and male-looking females
1) Accuracy

To examine whether participants showed different implicit attitudes towards female-looking males and male-looking females, we performed a paired-sample t-test. We found a significant difference, $t=-2.22$, $p=0.034$. This result suggests that participants made more errors when asked to associate positive words with female-looking males and negative words with male-looking females in the incongruent block, M= 5.47, SD=7.22 than to associate positive words with female-looking males in the congruent block M=4.06, SD=6.07. These results suggest that most participants showed an implicit preference for male-looking females over female-looking males.

In order to test if there are any differences between male and female participants in their implicit attitudes, we performed an independent-sample t-test. The result indicated no significant difference, $t=0.28$, $p=0.778$. Therefore, the results suggest that both male and female participants display an equal preference for female dressed male-type over male dressed female-type.


Figure 1. The average error for the congruent block (left) and the incongruent block (right)

2) Response time

Another paired-sample t test was conducted to examine whether participants' response time differ in the incongruent block than the congruent block. We found no significant difference, t=0.541, p=0.593. This result suggests that participants use almost same amount of time in the incongruent block M=1362.37, SD=1204.07, and in the congruent block M=1555.62, SD=1681.70.

Furthermore, by using an independent-sample t-test, we found that there was no significant difference between males and females, t=-0.33, p=0.7456. These results suggest that both male and female participants display similar preference for female dressed male-type and male dressed female-type.
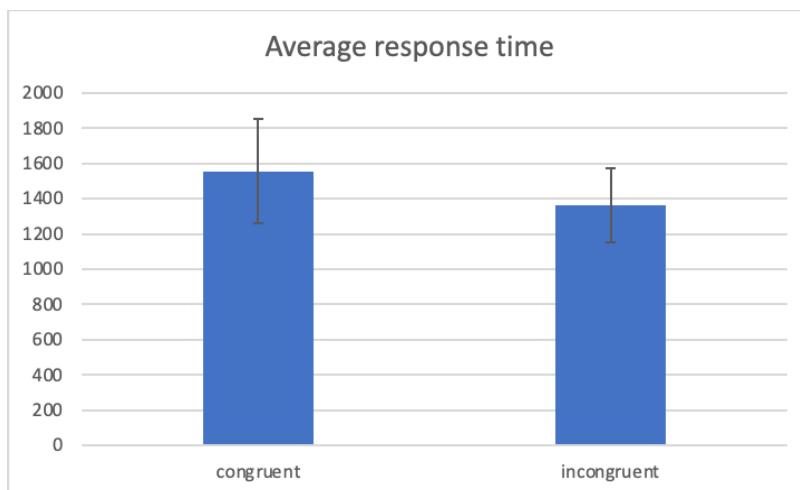

Figure 2. The response time for the congruent block and the incongruent block

(2). Explicit preference

Explicit preference scores toward cross-gender wearers were collected, and those scores unequal to fifty means participants show an explicit preference for female-looking males over male-looking females. The higher the score means that the more participants like one of the cross-gender clothes, and the lower the score means that less participants like one of the cross-gender clothes.

To test whether participants showed different explicit preferences towards female-looking males, M=45.43, SD=28.22, and male-looking females, M=58.14, SD=28.29, we performed a paired-sample t-test. Results found a significant difference, t=-3.36, p=0.002, suggesting that participants display an explicit preference for male-looking females over female-looking males.
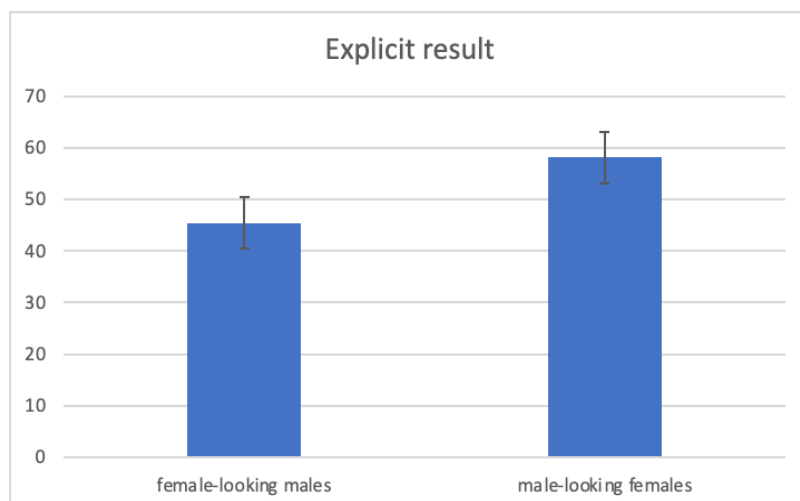
Figure 3. Participants preference for female-looking males (left) and male-looking females (right)

(3). Correlation analysis

According to Pearson correlational analysis, we did not find a significant difference between the difference in the explicit results and the difference in their response time, p=0.134 (see Figure 4).
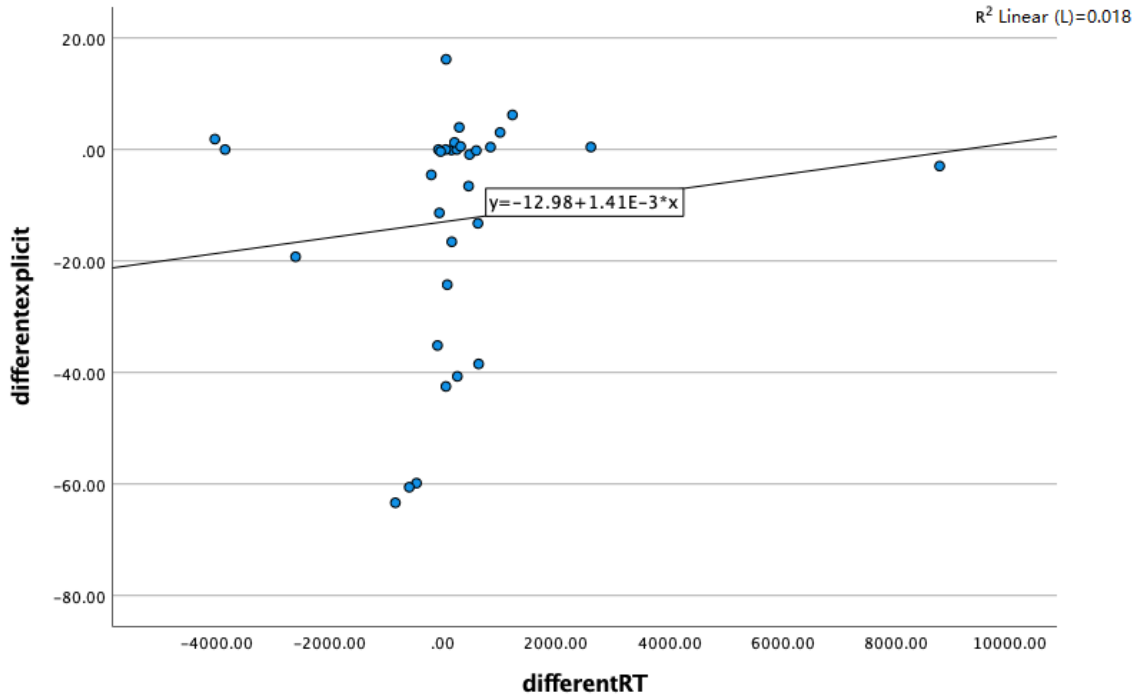

Figure 4. The correlation of different of explicit survey and different of response time (a)

Additionally, we conducted the same Pearson correlational analysis, and did not find a significant difference between the difference in explicit results and the difference in errors in IAT, p=0.239 (see Figure 5).
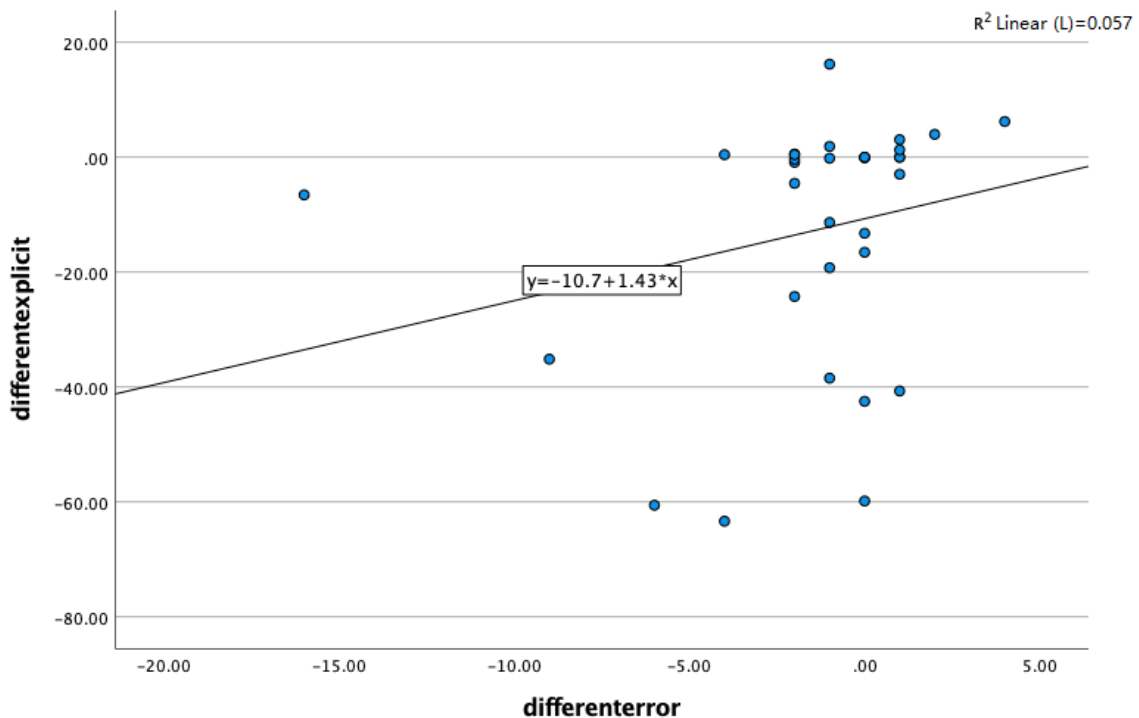

Figure 5. The correlation of different of explicit survey and different of response time (b)

4. Discussion

In this paper, we aim to investigate a link between positive and negative attitudes towards female cross-gender wearers and male cross-gender wearers, and found that people have negative attitudes towards female-looking males and positive attitudes towards male-looking females. We draw this conclusion through the explicit test and the IAT. These two methods can help us to know whether people are biased against females dressing males than males dressing females sensitively, quickly and effectively.

In a survey of 35 adults, we found that it was easier for participants to associate female cross-gender wearers with positive words and male cross-gender wearers with negative words. This research result is consistent with the previous research on LGBT. Due to the historical, global, national, community and individual causes, people will have prejudice, which is common in many fields of society and crosses the demographic characteristics (Sabin, Riskind, and Nosek, 2015). Furthermore, for most people, gay men are considered more like women than most heterosexual men, while lesbians are presumed to be more like men than most heterosexual women (Herek, 2000). In this case, because people always tend to be heterosexual rather than homosexual, people's stereotype of homosexuals or people with such characteristics is common compared with heterosexuals (Sabin, Riskind, and Nosek, 2015).

Consistent with previous studies, we found that there is no significant correlation between implicit and explicit measurements (Smyth and Nosek, 2007). Like Smyth's study, the research carried out in this paper displays that the different correlation between explicit surveys and response time is $p=0.134$, and the different correlation between explicit survey and different errors is $p=0.239$, which means there is no significant correlation between implicit and explicit test.

However, inconsistent with previous studies, we found that implicit testing found that people had more negative views on female-looking males, that is, more positive views on men and more positive views on women. Previous studies have shown that although many obstacles to conscious and explicit prejudice against women in the workplace have been eliminated, unconscious prejudice continues to affect women's opportunities and progress in the professional environment. Also, women will still be mistreated in the social environment (Gaddes, Jacobson, Montgomery and Moore, 2018).

In this paper, the implicit and explicit test results show that people have some biases. Participants have significantly higher error rates when they are asked to associate positive words with female looking males and negative words with male looking females. However, in contrast, participants' response time did not have a significant change between congruent and incongruent blocks. This may be because there are too many questions and participants lose information later. To reflect a higher error rate, participants choose the answer as quickly as possible.

This result may be due to traditional and modern factors. In addition to negative parental attitudes, cultures in many regions show that men should be masculine, so most people do not accept feminized males (Kai, Button, Mingyue and Sishi, 2016).

There are two areas for improvement in this study. The first point is that the same size is too small. Only 35 people aged 15-77 were included in this study, so that the results are not very convincing. The second point is that this article mainly focuses on whether people are biased against male looking females and female looking males, and does not put forward any solutions and suggestions for this phenomenon, which is also the direction of future research.

In general, based on the social phenomenon that some beautiful and feminine boys have received a lot of criticism from society, this study explores whether people are biased against males wearing female-type and females wearing male-type. By conducting both implicit and explicit tests on 35 Chinese adults, we find that people tend to use less time and make fewer mistakes to associate the female wearing male-type with positive words and the male wearing female-type with negative words. Furthermore, when asked what they think of males wearing female-type, those participants tend to give a relatively low comment.

In the explicit survey, the data displays that Chinese people prefer females wearing male-type rather than males wearing female-type. This study explores people's attitudes against others' dress

and provides a new link between positive and negative views and between female cross-gender and male cross-gender wearers. Based on our research, we found that people have a bad stereotype of males wearing female-type. In the future study, we suggest that researcher can further explore this social phenomenon and find a solution to this phenomenon in the past.

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