

Trustworthiness and Individual Differences The Impact Males Facial Structure (Width-to-Height Ratio) Can Have on Social Attributions of Others

Pinjie Lyu^{1,a,*}

¹*Nanjing Foreign Language School, Nanjing, Jiangsu, China*

a. lpj.lyupinjie@outlook.com

**corresponding author*

Abstract: People quickly develop opinions about others' personalities and intentions based solely on appearance and cognitive abilities, which can have serious consequences. The objective facial width-to-height ratio (fWHR) has been associated with social attributions of trustworthiness, with men who have wider faces being viewed as less trustable than men with narrower faces. In this investigation, we examine the relationship between fWHR and three crucial components of perceived trustworthiness: perceived benevolence, perceived ability, and perceived integrity, with the goal of better understanding this finding. There are two experiments in my research, both within-subject experiments, using a within-subject t-test to analyze data. We will measure individuals' different judgements according to images of different fWHR. We expect that "people perceive men who are narrower-faced as being more likely to take a risk and become vulnerable to others" and "lower levels of counterproductive behaviour and having appropriate knowledge do not correlate with the facial width-to-height ratio." In addition, we anticipate that people with narrower faces will more frequently be perceived as having higher integrity than people with wider faces, whereas people with narrow faces and broad faces are equal in having higher benevolence or ability. These results suggest that fWHR influences people's social choices, which may pave the way for future research on facial appearance, perceived trustworthiness, and impression management.

Keywords: Facial perceptions, Integrity, Facial width-to-height ratio (fWHR), Trustworthiness

1. Introduction

The impact males' facial structure (width-to-height ratio) can have on the social attributions of others. Recent studies have discovered strong correlations between facial width-to-height ratio (fWHR) of men, which is a bizygomatic width ratio (width between the two cheekbones) to upper facial height (distance between mid-eyebrow and upper lip), and both perceived trustworthiness and trustworthy behaviour (e.g., [1-4]). For example, men with wider faces are more likely to cheat and deceive than men with narrower faces [5]. Additionally, they are more likely to misuse other people's trust. Stirrat and Perrett discovered that men with greater fWHRs were more likely to betray others' trust in a series of trust games that provided chances for either individual gain through exploitation or mutual gain through cooperation[1]. In addition, the partners of these men with wider faces believed them to be

less trustworthy than those with narrower faces. According to a follow-up investigation by Stirrat and Perrett, men with relatively narrow faces were viewed as more trustable than men with wider faces, even after controlling for other facial characteristics (such as attractiveness).

This study of the fWHR establishes correlations between the fWHR and a person's trustworthiness in general, but the concept of trustworthiness is typically understood to be more fine-grained in the trust literature. Trustworthiness is specifically made up of perceived ability (i.e., perceived as possessing the necessary expertise, competencies, and skills), perceived benevolence (i.e., perceived as desiring to "do well for the trustor, rather than for egocentric profit" [6]) and perceived integrity (i.e., "it is assumed that the trustee adheres to ethical principles and sound moral" [7]). In addition, Colquitt et al. discovered [7], through a meta-analysis, that integrity, ability, and benevolence each exhibited significant and distinct associations with behavioural outcomes.

According to earlier research [8], perceived trustworthiness has three components: ability, integrity, and benevolence. The definition of ability was "that set of competencies, skills, and qualities that enables a party to exert impact within a given field." The definition of benevolence was "desire to benefit others," while integrity has been defined as "adherence to moral or ethical principles." They discovered that men with narrower faces were viewed as having a higher level of integrity, but there was no significant difference between narrower and broader faces regarding benevolence or ability. These findings have inspired me so I will research the social consequences of fWHR.

This study aims to look into the source of those with lower fWHRs' biased perceptions of trustworthiness. We will use a within-subject experimental design and a one-tailed t-test to analyze data.

2. Experiment 1

2.1. Method

All measurements, manipulations, and exclusions will be reported. This investigation will be approved by the Institutional Review Board and conducted in accordance with its recommendations for individual subjects, with informed written consent from all participants.

2.2. Participants

Four hundred individuals will be recruited for participation. Participants will be excluded because they do not consent or are under 18. Any incomplete questionnaires (<80% completion) will also be excluded from the data. We hope to achieve a sample size of 382.

Our primary hypothesis involved determining whether men with narrower faces are perceived as more likely to take risks and become vulnerable to others. Therefore, a power analysis was carried out using the software package G*Power (Erdfeiler, Faul, & Buchner, 1996). According to the findings of our experiment, using a paired t-test with a one-tailed alpha level of 5% and a threshold of 90% statistical power, we were able to detect an effect size of Cohen's *d* equal to 0.3 with a sample size of 400 participants.

2.3. Experimental Design

A total of 2 male images were used from Stirrat and Perrett's Study 3 [1]. Each image is a combination of three faces that have been altered to create one version with a wider face and one version with a narrower face. The same face was shown with its wider and narrower faces.

2.4. Measures and Procedures

Participants will complete a questionnaire consisting of 3 questions, choosing from "unlikely, very

unlikely, somewhat unlikely, somewhat likely, neither/neutral, likely, very likely". In total, they will see six narrow and six broad faces. All questions are related to integrity: "How likely do you think that this man will adhere to ethical principles and sound morals" "How likely do you believe this man is to engage in risky behaviour or to become vulnerable to someone?" "How likely do you perceive this man with adherence to moral or ethical principles?". Under the image of each face, a question is shown below. Participants will first see the narrow face on the left and answer their preferences. Then they will be shown the broader face on the right and answer the same question.

2.5. Data Analytic Approach

We will use the within-subject t-test to analyze data.

2.6. Results

Descriptive statistics. The p-value is smaller than 0.05.

Aim 1. We expect to find that people perceive narrower-faced men as more likely to take risks and become vulnerable to others. Precisely, as illustrated in Figure 1, we predict the result will be that participants will select the likely-side options more often than the unlikely-side options when making judgments about a narrower-faced man's integrity.

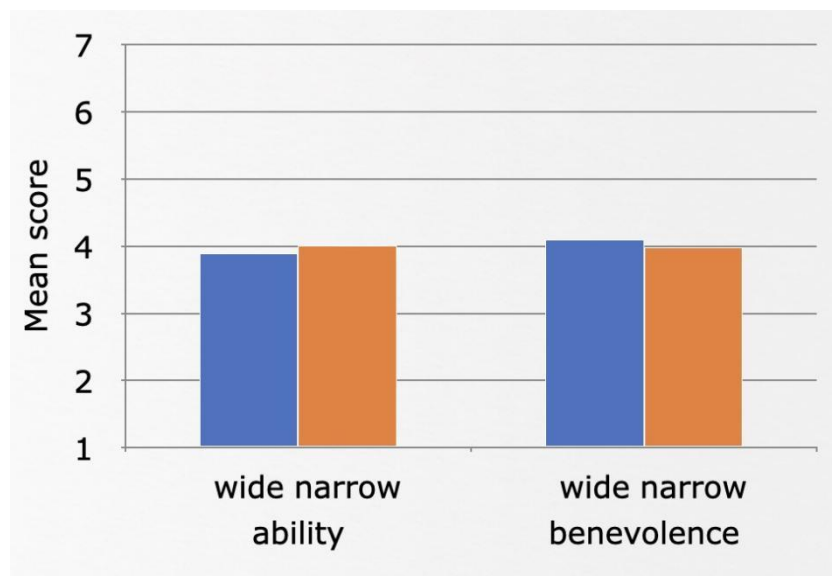


Figure 1: Illustration of Experiment 1. It illustrates that we expect people to perceive men with narrower faces as being with more integrity.

3. Experiment 2

3.1. Method

All measurements, manipulations, and exclusions will be reported. This study will be approved by the Institutional Review Board and conducted in accordance with its recommendations for human participants, with informed written consent from all participants.

3.2. Participants

Four hundred individuals will be recruited for participation. Participants will be excluded because they do not consent or are under 18. In addition, any incomplete questionnaires (<80% completion)

will also be excluded from the data. We hope to achieve a sample size of 382.

Our primary hypothesis involved assessing whether people perceive men with narrower faces as more likely to take risks and become vulnerable to others. Accordingly, we performed a power analysis using the software package G*Power (Erdfelder, Faul, & Buchner, 1996). According to the findings of our experiment, using a paired t-test with a one-tailed alpha level of 5% and a threshold of 90% statistical power, we were able to detect an effect size of Cohen's d equal to 0.3 with a sample size of 400 participants.

3.3. Experimental Design

12 male images were used from Stirrat and Perrett's Study 3[1]. Each photograph is a combination of three faces that have been altered to create one version with a broader face and one version with a narrower face. The versions of the same face with a more comprehensive and narrower face were displayed side by side.

3.4. Measures and Procedures

Participants need to answer the questionnaire consisting of 5 questions, choosing from the same options mentioned in the previous experiment. The first two questions are about ability: "How likely are you going to perceive this man as having appropriate knowledge?" and "How likely is it that you will view this man as possessing a set of skills that enable a party to exert influence in a particular domain?" And the last three questions are about benevolence: "How likely is it that the man has good intentions for the trustor in addition to an egocentric profit motive?", "The extent you think this man wants to do good to others?", "How likely do you think that the man is going to show tardiness and absenteeism at work."

3.5. Data Analytic Approach

We will use the within-subject t-test to analyze data.

3.6. Results

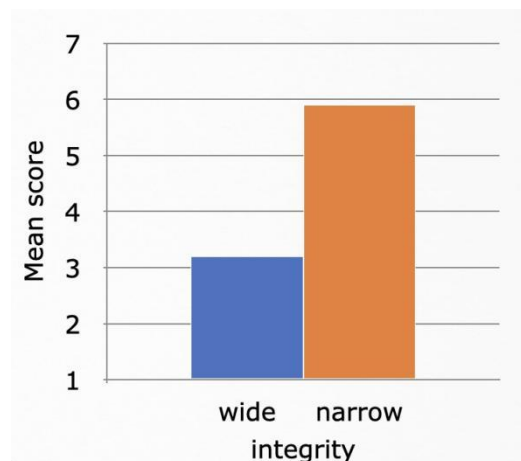


Figure 2: Illustration of Experiment 2. It illustrates that we expect no difference between people's perceptions of wide- or narrow-faced men towards ability and benevolence.

Descriptive statistics. The p-value is more significant than 0.05.

Aim 1. We expect that lower counterproductive behaviour levels and appropriate knowledge do not correlate with the fWHR. Precisely, as illustrated in Figure 2, we predict the result will be that

narrower and wider-faced individuals have no difference in being perceived as possessing more extraordinary ability or benevolence.

4. Conclusion

In the present study, we intend to deepen our understanding of this discovery by examining the relationship between fWHR and three important aspects of perceived trustworthiness: perceived integrity, perceived ability, and perceived benevolence. We intend to invite participants to complete questionnaires containing three trustworthiness dimensions. Given previous research relating fWHR to exploitation, cheating, and unethical behaviour (e.g., [5]), We expect men with narrower faces to be perceived as having more integrity because the previous behavioural correlates demonstrate a person's "tendency to adhere to principles considered correct or moral" [9]. Our results indicate that superficial characteristics may be used to select individuals for organizational roles (e.g., leadership roles), friendship, or romantic partners. For example, to regain the organization's credibility, a firm's board could choose a new leader with a higher reputation for integrity following an instance of firm misconduct. It is possible that making such decisions based on attributions is appropriate; therefore, men with narrower faces may act with high integrity (e.g., [1]). However, another possibility is that there may not be much of a difference in a man's trustworthiness between having a wide or narrow face (e.g., [10]), indicating that people may not always be accurate in their evaluations based on facial characteristics [11]. Consequently, future research should investigate how these face-based trustable determinations influence crucial outcomes in relationship dynamics, law, and finance. In addition, future research should investigate how other facial features beyond fWHR correspond to perceptions of benevolence, integrity, and competence.

5. Data Collection

The materials and data will be available through the Open Science Framework database.

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