

ORIGINAL ARTICLE

Preference for leaders with high and low facial width-to-height ratios: moderating roles of political ideology and voting context

Benjamin Banai ¹ · A,C,D,E,F, Marinela Bačić² · A,B,D,F, Irena Pavela Banai ³ · A,D,E,F

1: Banai Analitika, Osijek, Croatia

2: Department of Psychology, University of Zadar, Zadar, Croatia

3: Faculty of Humanities and Social Sciences, J. J. Strossmayer University of Osijek, Osijek, Croatia

BACKGROUND

It has been argued that human ancestors evolved greater sensitivity to certain traits that signal dominance in potential leaders. From this perspective, modern voters still favor certain physical characteristics during political elections. Indeed, previous studies have shown that voters prefer dominant candidates, especially when primed with wartime scenarios, and with conservative voters being more likely to choose a dominant leader. Because facial width-to-height ratio (fWHR) was found to be positively associated with perceived dominance, we sought to investigate the effect of fWHR on leader preference by taking into account voting context and voters' political ideology.

PARTICIPANTS AND PROCEDURE

A total of 148 participants took part in two online experiments in which we manipulated standardized facial images to represent faces with low and high fWHR. Furthermore, we assessed participants' political ideology and asked them to rate the extent to which faces with low and high fWHR looked like leaders during wartime and peacetime scenarios.

RESULTS

Preference for leaders with high fWHR was positively related to participants' political ideology, but only in a wartime scenario, suggesting that the more conservative participants were, the higher was their preference for leaders with high fWHR. This is consistent with the notion that preferences for dominant-looking leaders vary as a function of the contextual (voting context) and individual differences (political ideology).

CONCLUSIONS

The present findings provide new evidence for the contribution of fWHR in leader preference and significantly adds to the results of previous research demonstrating the roles of voters' political ideology and politicians' physical characteristics in perceiving leadership abilities.

KEY WORDS

facial width-to-height ratio; dominance; political ideology; wartime; peacetime

CORRESPONDING AUTHOR – Irena Pavela Banai, Ph.D., Faculty of Humanities and Social Sciences, J. J. Strossmayer University of Osijek, Trg Svetog Trojstva 3, 31000 Osijek, Croatia, e-mail: ipavelabanai@ffos.hr

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BACKGROUND

Group living is assumed to have evolved in the ancestral environment because of its benefits, such as improving individual fitness (Price & Van Vugt, 2015; Silk, 2007). However, this also led to the problems of coordination and cooperation among group members, which were presumably solved by choosing a leader who could successfully coordinate members in activities such as hunting and inter-group conflicts (Petersen, 2016; Van Vugt et al., 2008). Because these activities required physically strong and dominant leaders to successfully coordinate group members, it has been argued that human ancestors evolved greater sensitivity to physical traits that signal dominance and physical strength in a potential leader. The main assumption is that this proposed mechanism enabled human ancestors to successfully estimate leadership abilities of group members. It has been further assumed that modern voters still possess the same adaptive mechanism and favor certain physical characteristics in contemporary leaders when voting in contemporary political elections (Laustsen & Petersen, 2015; Pavela Banai et al., 2017; Van Vugt et al., 2008). From this perspective, modern voters might show greater sensitivity to physical traits that signal dominance.

PREFERENCE FOR DOMINANT LEADERS

There is real-world observational and experimental evidence that, for example, candidates with deeper voices, generally perceived as more dominant (Borkowska & Pawlowski, 2011), stand a better chance of winning the elections (Banai et al., 2018; Klofstad, 2016; Pavela Banai et al., 2017; Tigue et al., 2012). As for the candidates' faces, it has been reported that voters prefer masculine-looking candidates in an experimental competitive intergroup setting or in conflict (Spisak et al., 2012a, b), and when primed with wartime as opposed to peacetime scenarios (Little et al., 2007), presumably because masculinized male faces are perceived to be both more socially and physically dominant (Watkins et al., 2010). Similarly, dominant-looking candidates were preferred as leaders when participants were primed with the high-conflict scenario (Laustsen & Petersen, 2015; for overview see Laustsen & Petersen, 2017). The preference for dominant leaders in a high-conflict situation can be viewed as a mechanism developed to successfully defend group members and maintain an advantage over a rival group (Spisak et al., 2012b, see also Laustsen & Petersen, 2017).

Dominance preference in political candidates varies not only in response to the voting context (war/conflict or peace scenario), but also in relation to voters' personality traits, namely their political ide-

ology. In particular, right-leaning voters are more inclined to choose dominant leaders. For example, real-world electoral data as well as survey experiments showed that conservatives more than liberals prefer dominant candidate faces (Laustsen & Petersen, 2015, 2017). In a similar vein, it has been found that preferences for leaders with deeper voices – and, thus, more dominant leaders, was stronger among Republican and conservative participants than among Democratic and liberal participants (Laustsen et al., 2015). Furthermore, it has been shown that having a deeper voice was a particularly valuable asset for politicians in conservative and right-leaning countries in comparison to politicians in liberal and left-leaning countries (Banai et al., 2018). Laustsen (2017) also found that conservative voters value power and dominance in political candidates more than liberals, possibly because they tend to perceive the world as a threatening place (e.g., Duckitt & Sibley, 2010; Jost et al., 2009), making them particularly attentive to dangerous and threatening contexts.

FACIAL WIDTH-TO-HEIGHT RATIO AND DOMINANCE RATINGS

The above findings imply that candidates' vocal and facial features might influence voters' perceptions of leadership abilities. Given our focus on facial features in the present study, it is noteworthy that certain facial features have been shown to predict dominance ratings and behavior. For example, facial width-to-height ratio (fWHR) – the distance of bizygomatic width divided by the distance between the brow and upper lip (Carré & McCormick, 2008) – has been found to be positively related to the perceived and/or self-reported dominance (Geniole et al., 2015; Lefevre et al., 2014; Merlhiot et al., 2021; Valentine et al., 2014), aggression (Lefevre et al., 2014), threatening and dominant behavior (Geniole et al., 2015), threat potential (MacDonell et al., 2018), self-perceived power (Haselhuhn & Wong, 2012), risk-taking behavior (Ahmed et al., 2019), and even actual fighting ability in professional combatants, and penalty minutes per game in hockey players (Carré & McCormick, 2008; Zilioli et al., 2015). Considering these, mostly laboratory-based findings, it has been proposed that fWHR may be a cue for general behavioral dispositions. However, it is important to note that more recent, large-scale investigations with improved research design found no evidence that fWHR predicts self-reported behavioral tendencies (e.g., Kosinski, 2017; Wang et al., 2019). Wang et al. (2019) further elaborated this by suggesting the possibility of an evolutionary mismatch (Li et al., 2018), whereby some mechanism that was adaptive in ancestral environments is no longer adaptive in modern environments. It may be the case that fWHR was associated with behavioral tenden-

cies in the ancestral environment which made human ancestors more sensitive to this trait, but fWHR may no longer be predictive of behavioral tendencies in contemporary environments. However, this does not mean that fWHR is not predictive of social judgement and perceived dominance. As pointed out earlier, existing research has found that fWHR is associated with various antisocial perceptions, such as dominance (Geniole et al., 2015) and aggressiveness (Lefevre & Lewis, 2014). Also, most recent findings suggest that higher fWHR is associated with threat perception (Durkee & Ayers, 2021).

Considering this, it can be assumed that fWHR might predict the perception of leadership abilities and the outcome of political elections. Specifically, candidates with higher fWHR might be preferred as leaders. To our knowledge, only a few studies have been conducted to investigate the contribution of fWHR in predicting politicians' traits and electoral success. For example, it has been shown that the fWHR of former U.S. presidents positively correlated with their perceived achievement drive (Lewis et al., 2012). However, when politicians' fWHR was assessed using a digital database of photographs of U.S. Senate candidates, no relationship was found between politicians' fWHR and the election outcome (Pavela Banai et al., 2020). Although studies using data from real elections increased ecological validity (Lewis et al., 2012; Pavela Banai et al., 2020), assessment of fWHR on unstandardized photographs may be susceptible to large measurement error. Even subtle changes in facial expression, head position, and different external conditions under which the photographs were taken can influence fWHR measurements (e.g., Třebický et al., 2016). Furthermore, as mentioned earlier, preference for dominant leaders varies in response to voting context and voters' political ideology (Laustsen & Petersen, 2015, 2017; Spisak et al., 2012a, b). Therefore, candidates with high fWHR might be preferred only under conditions of war and inter-group conflicts. In parallel, this preference might only be present among conservative voters. However, previous studies on the relationship between fWHR and politicians' characteristics and success have not examined the voting context or voters' political ideology.

THE PRESENT STUDY AND HYPOTHESIS

Considering the above studies, we aimed to investigate the effect of fWHR on leader preference in two online experiments. To avoid possible measurement error in fWHR assessment, we used standardized face images and manipulated them to represent faces with low and high fWHR. We assessed participants' political ideology and experimentally manipulated voting context by introducing wartime and peacetime scenarios.

Following the methodology of previous studies (e.g., Spisak et al., 2012a), in Experiment 1 we were first interested in the general extent to which faces with low and high fWHR look like a leader by taking into account participants' political ideology. Because the voting context was not specified, we did not expect to find an effect of fWHR on the perception of the leadership abilities. However, we expected to find higher leadership ability ratings of faces with high fWHR among more conservative participants, and vice versa.

In Experiment 2, we investigated preferences for leaders with high fWHR in relation to the respondents' political ideology and voting context. Building on previous research, we hypothesized that preferences for leaders with high fWHR would be higher in wartime, as opposed to peacetime. We also expected this relationship to be moderated by participants' political ideology. Specifically, we assumed this effect would be larger among conservative participants.

PARTICIPANTS AND PROCEDURE

PARTICIPANTS

A total of 148 participants (99 women and 49 men, $M_{\text{age}} = 23.07$, $SD_{\text{age}} = 6.29$) were recruited to voluntarily participate in two online experiments by following a link distributed to various student groups via social media, primarily Facebook. Participants were not compensated for their time.

MATERIALS AND MANIPULATIONS

Computer-generated and validated images of male faces were selected from the open-access face database, which is freely available for social perception research (Todorov & Oosterhoof, 2011; Todorov et al., 2013). All images show frontally oriented and hairless faces against a black background. The database contains seven separate databases of faces modeled as a function of judgments of attractiveness, competence, dominance, extroversion, likability, threat, and trustworthiness. Each database contains 25 different identities, and each face identity had seven variations along the judgment dimension, ranging from $-3 SD$ to $+3 SD$. For example, the 'attractiveness database' contains images of 25 men, each of whom has seven versions – ranging from $-3 SD$ to $+3 SD$ perceived attractiveness degree.

In selecting the faces, we wanted to ensure that the stimuli generally represented plausible political leaders. According to the biosocial leadership categorization model (Spisak et al., 2012a), potential leaders share a perceived common threshold of general leadership traits. Therefore, a candidate's general ap-

pearance initially predicts whether they are likely to be considered as leaders. After passing this initial evaluation, leaders are further evaluated depending on the voting context. Thus, to ensure that the stimuli represented candidates who were perceived as suitable for the leader position, we took into account the evidence that perception of facial competence predicts general leader preferences (Laustsen & Petersen, 2018; Todorov et al., 2005). Therefore, we selected four faces from a ‘competence database’, which were modeled to reflect +3 *SD* perception of facial competence. We selected images of Caucasian faces only, as the vast majority of citizens where the study was conducted were Caucasians. To control for possible effects of facial skin coloration, all images were converted to grayscale.

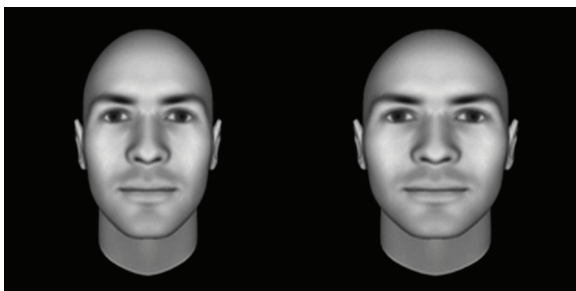
Finally, we manipulated the fWHR of the four selected faces by increasing the bizygomatic width of the faces by approximately 10% while keeping the facial height constant. Faces with higher fWHR retained a natural look but were noticeably wider (Figure 1). In total, eight faces (four with low fWHR and four with high fWHR) were used as stimuli in this study, with the average fWHR for faces with low fWHR being 1.65 and the average fWHR for faces with high fWHR being 1.84.

PROCEDURE

Ethical approval for this research was obtained from the ethical committee of Department of Psychology, University of Zadar. We conducted two online experiments using PsyToolkit (Stoet, 2010, 2017). Participants were initially given assurance guaranteeing the anonymity of their responses and the opportunity to contact the authors if they had any questions, and were informed that they could stop answering at any time, in which case their responses would not be re-

Figure 1

Example of male faces with low (left) and high (right) fWHR



Note. fWHR – facial width-to-height ratio. Image on the left is taken from a computer-generated public face database (Todorov & Oosterhoof, 2011; Todorov et al., 2013). Image on the right is manipulated by increasing bizygomatic width.

corded. Participants were first asked to provide basic demographic information (gender, age) and to rate their political ideology on a scale from 1 (*completely left*) to 9 (*completely right*). Next, they proceeded to the two experiments presented below.

EXPERIMENT 1

PROCEDURE

In Experiment 1, participants were randomly presented with eight faces of potential leaders (four with low fWHR and four with high fWHR) and instructed to rate the extent to which each face on the screen looked like a leader on a scale ranging from 1 (*this person does not look like a leader at all*) to 8 (*this person looks completely like a leader*).

RESULTS

All analyses were conducted using R v. 4.1.0 (R Core Team, 2021) and the packages lme4 v. 1.1-21 (Bates et al., 2015), emmeans v. 1.3.4 (Lenth, 2019), lmer Test v. 3.1-3 (Kuznetsova et al., 2017), and ggplot2 v. 2.2.1 (Wickham, 2009). Descriptive statistics for the perceived leadership ability, i.e., the extent to which faces with low and high fWHR look like a leader, and participants’ political ideology are presented in Table 1. Univariate normality of the distributions was tested using Kline’s (2011) criteria for normal distribution. The skewness and kurtosis indices did not exceed 3 and 8, respectively, so we proceeded with parametric statistical tests.

To test the effects of fWHR on perceived leadership ability, we estimated a linear mixed-effects model with crossed random effects of participants and stimuli. In this model, we considered participants as a sample from the population of potential voters and stimuli as a sample of potential leader faces; thus we modeled two random effects structures. fWHR was treated as a within-subjects and between-items factor (see Baayen et al., 2008 for more details on crossed-random effects specification). The significance of the fixed effects was assessed by inspecting 95% confidence intervals obtained by bootstrapping 10,000 samples, and by inspecting *p* values obtained with the lmerTest package. In addition, we included participants’ political ideology in the second model and tested for possible interaction effects of fWHR and participants’ mean-centered political ideology on estimated leadership ability (Table 2).

The results did not show the effects of fWHR and participants’ political ideology, nor their interaction, on perceived leadership ability (Table 2, Model 1). To test the robustness of these results, we included participants’ age and gender as control variables in an

Table 1

Descriptive statistics for the extent to which faces with low and high fWHR look like a leader and participants' political ideology

	Face ratings								PI
	Low fWHR				High fWHR				
	1	2	3	4	1	2	3	4	
<i>M</i>	4.56	4.60	4.30	3.89	4.11	4.18	4.25	3.24	5.22
<i>SE</i>	0.16	0.15	0.15	0.15	0.14	0.15	0.16	0.14	0.17
<i>SD</i>	1.91	1.86	1.81	1.80	1.74	1.80	1.89	1.75	2.05
<i>SI</i>	-0.18	-0.17	-0.04	0.27	-0.03	0.11	0.09	0.52	-0.28
<i>KI</i>	-0.71	-0.73	-0.84	-0.78	-0.73	-0.63	-0.86	-0.48	-0.32

Note. fWHR – facial width-to-height ratio; PI – political ideology; SI – skewness index; KI – kurtosis index.

Table 2

Summary table of mixed effects linear models of the extent to which faces with low and high fWHR look like a leader

Fixed effects	Model 1					Model 2						
	<i>B</i>	<i>SE</i>	95% CI		<i>t</i> (<i>df</i>)	<i>p</i>	<i>B</i>	<i>SE</i>	95% CI		<i>t</i> (<i>df</i>)	<i>p</i>
			2.5%	97.5%					2.5%	97.5%		
Intercept	4.34	0.22	3.91	4.77	19.95 (7.91)	< .001	4.34	0.22	3.91	4.78	19.94 (7.94)	< .001
fWHR (ref. low)	-0.39	0.29	-0.97	0.19	-1.34 (6.51)	.224	-0.39	0.29	-0.96	0.18	-1.34 (6.52)	.224
PI							0.02	0.05	-0.08	0.11	0.36 (145.99)	.720
fWHR*PI							0.02	0.05	-0.09	0.12	0.31 (145.99)	.756
Random effects												
Participants												
Intercept <i>SD</i>			0.96						0.96			
fWHR <i>SD</i>			0.72						0.73			
Face												
Intercept <i>SD</i>			0.38						0.38			
Residual <i>SD</i>			1.56						1.56			

Note. fWHR – facial width-to-height ratio; PI – political ideology; *B* – unstandardized regression coefficient; 95% CI – 95% confidence interval obtained by bootstrapping 10,000 samples.

additional model. Again, neither the effects of candidates' fWHR and participants' political ideology, nor their interaction, were significant. Furthermore, while there was no difference between genders ($B = 0.32$, $SE = 0.18$, $t(144) = 1.78$, $p = .077$, 95% CI [-0.04, 0.65]), there was a negative relationship between age and perceived leadership ability ($B = -0.04$, $SE = 0.01$, $t(144) = -2.90$, $p = .004$, 95% CI [-0.07, -0.02]).

Because the voting context was not specified in Experiment 1, we did not expect to find an effect of fWHR on the perception of the leadership abilities. Therefore, the present results are in line with the initial prediction. This also leads to the conclusion that investigating leader preferences without the contextual information (voting in wartime and peacetime) may not be appropriate. Previous studies have shown

that voters prefer masculine-looking candidates when primed with conflict or wartime scenarios (Laustsen & Petersen, 2015; Little et al., 2007; Spisak et al., 2012a, b). Given the importance of contextual information, in Experiment 2, we investigated preferences for leaders with high fWHR in relation to the respondents' political ideology and voting context by including wartime and peacetime scenarios.

EXPERIMENT 2

In Experiment 2 we sought to investigate variations in preferences for leaders with high fWHR as a function of voting context (wartime and peacetime) and participants' political ideology. The same participants from the Experiment 1 participated in Experiment 2.

PROCEDURE

In order to manipulate the voting context, participants were first instructed to imagine that they were citizens of an imaginary country where presidential elections were to be held. They were then presented with scenarios of war and peace that have been used in previous studies (Spisak et al., 2012a). The war scenario emphasized that the country is in an ongoing, costly war with a neighboring country and that citizens must mobilize to protect their country's resources. The peace scenario emphasized that the relationship with the neighboring country is strained, but most citizens are opposed to physical conflict (see Spisak et al., 2012a for more details).

All participants were assigned to both the war and peace conditions, and the order of the conditions was randomized. In each condition, participants were presented with four pairs of faces (each pair consisted of one face with low fWHR and one face with high fWHR) in a random order. That is, in each of the four trials, two images were presented simultaneously

on the screen, along with a war/peace scenario during a hypothetical presidential election in the country. The order of appearance of low and high fWHR faces on the right and left sides was counterbalanced. Participants were instructed to imagine voting in the presidential election and then rate the extent to which either candidate would be a better president. Participants voted on a scale of -8 (*candidate on the left would definitely be a better president*) to 8 (*candidate on the right would definitely be a better president*) a total of eight times (i.e., four pairings for the wartime condition and four pairings for the peacetime condition).

RESULTS

Prior to analysis, ratings were recoded so that negative response values reflect preferences for leaders with low fWHR, while positive values reflect preference for leaders with high fWHR. The descriptive statistics for leadership preferences under the war and peace scenarios are presented in Table 3.

To test the effects of candidates' fWHR on leader preference in wartime and peacetime, we conducted a linear mixed-effects model analysis with crossed random effects of participants and stimuli. In this model, the war/peace scenario was treated as a within-subjects and between-items factor. Furthermore, we assessed fixed effects of voting context and tested for a possible interaction effect of the mean-centered participant's political ideology and voting context on leader preference (Table 4).

First, there was no effect of voting context on leader preference (Table 4, Model 1). Second, we introduced fixed effects of mean-centered political ideology and an interaction term between voting context and political ideology (Table 4, Model 2). While political ideology was not a significant predictor of leader preference, the interaction between ideology and voting context was significant (see Figure 2). In peacetime, political ideology was not related to

Table 3

Descriptive statistics of preferred leader ratings under war- and peacetime

	Scenario							
	War				Peace			
	1	2	3	4	1	2	3	4
<i>M</i>	-0.74	-0.84	1.41	-3.20	0.43	-1.69	0.59	-2.85
<i>SE</i>	0.47	0.46	0.44	0.39	0.46	0.43	0.46	0.38
<i>SD</i>	5.67	5.65	5.40	4.68	5.64	5.23	5.58	4.66
<i>SI</i>	0.21	0.23	-0.39	1.01	-0.04	0.57	-0.17	1.01
<i>KI</i>	-1.42	-1.34	-1.20	0.08	-1.43	-0.91	-1.37	0.18

Note. 1-4 – pairs of presented faces; SI – skewness index; KI – kurtosis index.

Table 4

Summary table of mixed effects linear models of leader preference during wartime and peacetime, and participants' political ideology

Fixed effects	Model 1					Model 2						
	<i>B</i>	<i>SE</i>	95% CI		<i>t</i> (<i>df</i>)	<i>p</i>	<i>B</i>	<i>SE</i>	95% CI		<i>t</i> (<i>df</i>)	<i>p</i>
			2.5%	97.5%					2.5%	97.5%		
Intercept	-0.88	0.91	-2.65	0.95	-0.97 (6.60)	.368	-0.88	0.91	-2.66	0.92	-0.97 (6.60)	.368
Voting context (ref. peace)	0.04	1.27	-2.47	2.53	0.03 (6.24)	.977	0.04	1.27	-2.47	2.54	0.03 (6.20)	.977
PI							-0.04	0.13	-0.30	0.23	-0.28 (146.00)	.779
Voting context*PI							0.43	0.15	0.13	0.73	2.83 (146.00)	.005
Random effects												
Participants												
Intercept <i>SD</i>			2.40						2.41			
fWHR <i>SD</i>			2.15						1.98			
Face												
Intercept <i>SD</i>			1.74						1.74			
Residual <i>SD</i>			4.61						4.61			

Note. PI – political ideology; *B* – unstandardized regression coefficient; 95% CI – 95% confidence interval obtained by bootstrapping 10,000 samples. Significant effects are in bold.

leader preference ($B = 0.04$, $SE = 0.13$, 95% CI [-0.23, 0.30]). In contrast, during wartime, preference for leaders with high fWHR was positively associated with political ideology ($B = 0.40$, $SE = 0.15$, 95% CI [0.11, 0.68]), suggesting that the more conservative participants were, the higher was their preference for leaders with high fWHR.

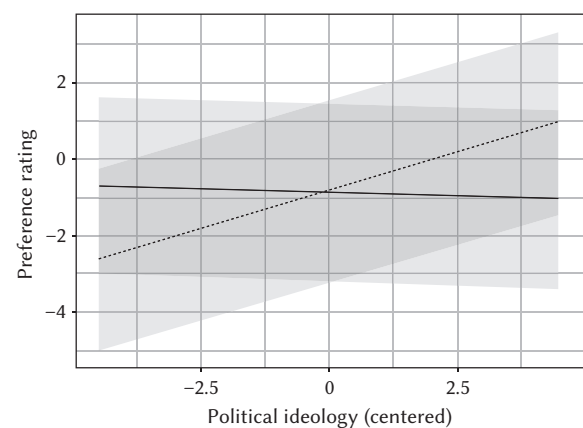
To examine the robustness of these findings, we entered the order of presentation of the two voting contexts, participants' gender, and age as control variables. While the significance of fixed effects and interaction terms remained the same, we found no effect of session order ($B = -0.35$, $SE = 0.48$, $t(145) = -0.72$, $p = .471$, 95% CI [-1.38, 0.61]), gender ($B = 0.55$, $SE = 0.52$, $t(145) = 1.05$, $p = .297$, 95% CI [-0.50, 1.57]), or age ($B = -0.04$, $SE = 0.04$, $t(145) = -1.07$, $p = .289$, 95% CI [-0.12, 0.03]).

DISCUSSION

Previous studies have shown that dominance preferences in political candidates vary in response to voters' political ideology (e.g., Laustsen & Petersen, 2015, 2017) and the context in which the voting occurs (e.g., Laustsen & Petersen, 2015, 2017). Because fWHR has been shown to be related to perception of dominance,

Figure 2

Moderating role of political ideology in preferences for leaders with high fWHR during war- and peacetime.



Scenario
— Peace - - - - War

Note. fWHR – facial width-to-height ratio. Higher preference rating indicates greater preference for leaders with high fWHR.

aggression, and threat (e.g., Durkee & Ayers, 2021; Geniole et al., 2015; Lefevre & Lewis, 2014), we assumed that fWHR might predict perception of leadership abilities. Therefore, we investigated the extent

to which faces with low and high fWHR look like a leader (Experiment 1) and preferences for leaders with high fWHR as a function of respondents' political ideology and the voting context (Experiment 2).

In Experiment 1, we found no support for the effect of fWHR and participants' political ideology on perceived leadership ability. However, when introducing voting context in Experiment 2, we found that, although political ideology was not related to preference for leaders with high fWHR in peacetime, it positively predicted preference in wartime. This result suggests that the more conservative participants are, the higher is their preference for leaders with high fWHR in wartime.

The present study provided three important findings. First, the variation in preference for leaders with high fWHR significantly complements the findings of previous research showing the role of politicians' physical characteristics in their perceived leadership abilities (e.g., Laustsen & Petersen, 2015; Little et al., 2007; Spisak et al., 2012a).

Second, we successfully replicated key findings from previous research on preferences for dominant-looking leadership faces during times of intergroup conflict. Altogether, these results support the prediction that both the voters' political ideology and voting context play an important role in leader choice. In this regard, it is noteworthy that the individual contributions of these variables in predicting leader preferences were not significant; only their interactive effects were. This is consistent with the notion that preferences for dominant-looking leaders vary as a function of the contextual (voting context) and individual differences (political ideology), with both being equally important (Laustsen & Petersen, 2017). We propose that the present results reflect the adaptive mechanism within an evolved psychological system of followership (Laustsen & Petersen, 2015). That is, the higher preference for leaders with high fWHR in wartime among conservative voters, who are assumed to be more attentive to threatening contexts, may provide a solution to the adaptive problem of finding an adequate leader for successful defense. This is in line with the past research showing that the mechanism underlying preference for dominant-looking leaders during social conflict is related to the perception that dominant leaders are better able to respond to threat, rather than the perception that a non-dominant leader is better able to respond to problems of cooperation (Laustsen & Petersen, 2017).

The third, and perhaps the most important, finding is the contribution of fWHR to leader preference. It has been suggested that a higher fWHR signals dominant traits and behaviors (e.g., Ahmed et al., 2019; Carré & McCormick, 2008; Geniole et al., 2015; Lefevre et al., 2014; Merlhiot et al., 2021; Valentine et al., 2014; Zilioli et al., 2015). However, recent large-scale studies have called into question the relationship between fWHR

and behavior (e.g., Kosinski, 2017; Wang et al., 2019). Nevertheless, fWHR seems to predict dominance ratings and threat perception (e.g., Durkee & Ayers, 2021; Geniole et al., 2015). These lines of research converge to the possibility of an evolutionary mismatch (Li et al., 2018), whereby fWHR was associated with behavioral tendencies in the ancestral environment which made human ancestors and contemporary voters sensitive to this trait, but it may no longer be predictive of behavior in modern environments. In the present study, preference for leader with high fWHR was found in a theoretically meaningful situation, i.e., among more conservative participants in a war scenario. In this regard, the present study provided new insights that can make an important contribution to ongoing fWHR research and debate. Specifically, the pattern of the present findings is in line with the assumption that fWHR may signal leadership skills necessary for successful defense and an adequate response to threat during social conflict. We are unable, of course, to make strong inferences about the true adaptive signal value of fWHR, or to test the mismatch hypothesis with the current data. But future studies should look into the degree to which the relationships between fWHR and various traits and behavioral tendencies in potential leaders appear to represent an evolutionary mismatch. Furthermore, because of the debatable signal value of fWHR, we encourage future research to investigate how other similar facial structures or fWHR variants (e.g., Hodges-Simeon et al., 2021) relate to different leader preferences.

CONCLUSIONS

The present study showed that the preference for leaders with high fWHR was positively related to participants' political ideology, suggesting that the more conservative participants were, the higher was their preference for leaders with high fWHR, but only in a wartime scenario. This is consistent with the notion that preferences for dominant-looking leaders vary as a function of the contextual (voting context) and individual differences (political ideology), with both being equally important. In conclusion, the present study provides additional evidence for the role of politicians' physical characteristics in perception of their leadership abilities and the importance of contextual and individual factors in leader preference. It also provides new evidence for the role of fWHR in leader preference and significantly builds on previous research on fWHR and various traits and behaviors.

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