

**THE BIAS OF PHYSICAL ATTRACTIVENESS IN LEADER
EMERGENCE: A META-ANALYTIC REVIEW**

An Undergraduate Research Scholars Thesis

by

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TABLE OF CONTENTS

	Page
ABSTRACT.....	1
CHAPTER	
I INTRODUCTION	2
Objectives	6
Hypotheses	7
Research Questions.....	7
II METHODS	9
Identification of Studies	9
Inclusion Criteria	9
Coding Procedures	10
Meta-Analytic Techniques	10
III RESULTS	12
IV CONCLUSION.....	18
REFERENCES.....	20

ABSTRACT

The Bias of Physical Attractiveness in Leader Emergence: A Meta-Analytic Review (May 2014)

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The purpose of this research was to develop understanding of the relationship between physical attractiveness and leadership emergence, and the perceived biases that help explain this relationship. Focused on adult populations in regards to situations involving leadership, findings in this study can be applied to persons in the role of hiring or promoting individuals to higher levels of leadership by helping them to identify biases that influence their decisions in selecting leaders. Through conducting a meta-analysis, I completed an extensive literature review to gather previous studies on physical attractiveness and leader emergence, and coded and quantitatively summarized the studies. Results of the meta-analysis showed positive relationships between physical attractiveness, perceived social competence, and leader emergence. Additionally, I found that male raters anchor more on physical attractiveness in decisions involving leader potential and selection, but for male and female leaders themselves, physical attractiveness was equally important for being selected as a leader.

CHAPTER I

INTRODUCTION

What makes a leader? Is it their traits or what we perceive about their traits? In searching for an answer, leadership researchers have traditionally examined correlations between leaders' traits with the ability to naturally emerge as a leader. In particular, the trait theory of leadership proposes that individuals who tend to emerge as leaders in groups and organizations share common characteristics, which in large part, are genetically heritable (Ilies, Gerhardt, & Le, 2004). Thus, research on the trait theory of leadership focuses on identifying individual differences, such as personality and intelligence, which form the “make-up” of a person most likely to emerge as a leader; that is, to be selected as a leader, be viewed as having leadership potential, and/or be seen as leader-like (Hogan, Curphy, & Hogan, 1994).

Research has demonstrated some level of support for the trait theory of leadership, finding that higher intelligence and personality traits including extraversion, conscientiousness, openness to experience, and emotional stability predict one's ability to emerge as a leader (Judge, Bono, Ilies, & Gerhardt, 2002; Judge, Colbert, & Ilies, 2004). However, ascription-actuality trait theory argues there are “traits that *really* matter for leadership and those that *seem* to matter” (Antonakis, 2011). Specifically, the theory argues there are “two routes to leader outcomes that stem from traits: the route that objectively matters and the route that appears to matter but objectively does not” (Antonakis, 2011). These non-objective routes can be known as illusory correlations which the observers see as correlating intuitively with certain traits that are

predictive of leadership (Tversky & Kahneman, 1974). In that regard, it is often common human practice to believe that physical traits such as height and physical attractiveness indicate likelihood of successful leadership. For example, tall or physically attractive individuals are viewed as possessing certain psychological traits relevant to successful leadership, when in fact physical traits may have no relevance for either effective leadership or the possession of actual psychological traits related to effective leadership (Antonakis, 2011). The practice of ascribing psychological traits to physical characteristics has impacted the effectiveness of decisions in hiring and promoting leaders. As hiring managers continue to follow their intuition regarding how physical characteristics are indicative of certain traits, those beliefs can become self-fulfilling. Thus, cognitive biases should be considered in theories regarding traits and leader emergence (Rush et al, 1978).

With this brief overview of the trait theory of leadership and ascription-actuality trait theory, I argue that there is a need to more fully understand the human biases that play into decision-making processes regarding the selection of leaders. Overall, scholars must come to understand these biases, why they exist, how these biases impact decisions, and then practice unbiased decision making.

In this study, I have chosen to focus on one physical trait that can introduce human biases in leader selection decision-making processes: physical attractiveness (i.e., physical beauty).

Research shows that physical attractiveness influences variables ranging from romantic partner selection (Adams, 1977), to a teacher's thoughts of their students' intelligence and outcome of their academic career (Ritts, Patterson, & Tubbs, 1992), or to the ending judgment of a jury in

simulated trials (Mazzella & Feingold, 1994). Physical attractiveness plays a key role in decision making as individuals often succumb to the “what is beautiful is good” stereotype (Dion, Berscheid, and Walster 1972). In particular, humans inherently perceive that attractive individuals have more desirable personal qualities and thus will lead more successful lives than unattractive individuals (Thornhill & Gangestad, 1999).

For example, in the work domain, research has shown that attractive individuals have a distinct advantage in job interviews as they are more likely to be hired for jobs than less attractive individuals (Chiu & Babcock, 2002; Marlowe, Schneider, & Nelson, 1996). Furthermore, research has found that attractive people tend to receive more favorable job evaluations (Eagly, Ashmore, Makhijani, & Longo, 1991; Langlois et al., 2000) and are at an advantage in job-related outcomes (Hosoda, Stone-Romero, & Coats, 2003). Indeed, there is evidence for what economists call a “beauty premium” in the workplace in which attractive employees earn about 10% to 15% more than their unattractive counterparts (Hamermesh & Biddle, 1994).

The attractiveness advantage is also seen in the political realm as attractive political candidates are evaluated more positively than unattractive individuals (Budesheim & Depaola, 1994). For example, Cherulnik’s (1995) study video-taped mock election speeches and found that physical appearance influenced the ratings of leadership ability. Little, Burriss, Jones, and Roberts (2007) also found that voting outcomes can be predicted by facial shape. In essence, this supports an early claim made by Efran and Patterson (1974) that “voters vote beautiful.”

All that said, the impacts of physical attractiveness have been found to vary according to gender. For instance, Cash, Gillen, and Burns (1977) found that employment potential ratings of both genders were higher for attractive applicants and attractive applicants received higher qualification ratings than unattractive applicants for jobs traditionally held by the applicant's sex. Later, Heilman and Saruwatari (1979) found that attractive males were advantaged in a managerial and a clerical job, but attractive females only were advantaged in a clerical job. They went further to develop the "beauty is beastly" effect, in which factors such as sex and type of job may affect the physical attractiveness bias. Furthermore, Beehr and Gilmore (1982) found that the attractiveness of the individual and the perceived relevance of attractiveness for job performance impacted employment decisions, but only for male applicants.

What accounts for these relationships between physical attractiveness and various positive outcomes? Harking back to the ascribed-actuality trait theory of leadership, researchers have found that attractive people are perceived as possessing more favorable personality traits (Eagly, Ashmore, Makhijani, & Longo, 1991; Gillen, 1981), particularly greater social competence (Dion, Berscheid, & Walster 1972; Berscheid & Walster, 1974). Moreover, physically attractive individuals are often judged as having greater leadership competence and intelligence (Surawski & Ossoff, 2006).

Thus, when making a choice between an attractive and unattractive individual for a leadership position, the decision maker is impacted by all the above influences of physical attractiveness. However, while many studies have examined the impact of physical attractiveness on various outcomes, less has been done to specifically link physical attractiveness to leader emergence.

Moreover, the studies that have examined this relationship have often yielded mixed findings. These mixed findings have cast confusion on the actual strength of the relationship between physical attractiveness and leader emergence and what variables explain this relationship. Through this study, I hope to overcome these limitations by calculating the precise magnitude of the relationship between physical attractiveness and leadership emergence in order to inform those making leadership selection decisions about their own biases in choosing leaders. I will do this by using meta-analysis.

Meta-analysis is a method used to quantitatively summarize research findings across a number of different research studies that focus on the same phenomenon. It allows for the computation of population-level findings that are not subject to the limitations of small sample sizes. Conducting a meta-analysis begins with completing an extensive literature review of empirical studies measuring the relationships between physical attractiveness and leader emergence. Following the literature review, various pieces of information from previous studies are coded, such as sample size and correlations. Then, using a meta-analysis method advanced by Hunter & Schmidt (2004), meta-analytic correlations for these relationships are computed. These steps will be further explained through the research methods explained in Chapter II of this thesis.

Objectives

My objectives are thus as follows:

1. Determine the meta-analytic relationship between physical attractiveness and leadership emergence.

2. Meta-analytically determine whether perceptions of social competence explain this relationship. In other words, test whether physically attractive people may emerge more as leaders because they are viewed as being more social.

Hypotheses

I plan to test the following hypotheses (shown in Figure 1):

1. There is a positive relationship between physical attractiveness and leadership emergence.
2. There is a positive relationship between physical attractiveness and perceived social competence.
3. There is a positive relationship between perceived social competence and leadership emergence.

Research Questions

Additionally, I will explore the following two research questions which investigate gender differences in leadership emergence:

1. Is physical attractiveness more predictive of leader emergence for male leaders or female leaders?
2. Are male raters or female raters of leadership emergence more influenced by perceptions of physical attractiveness?

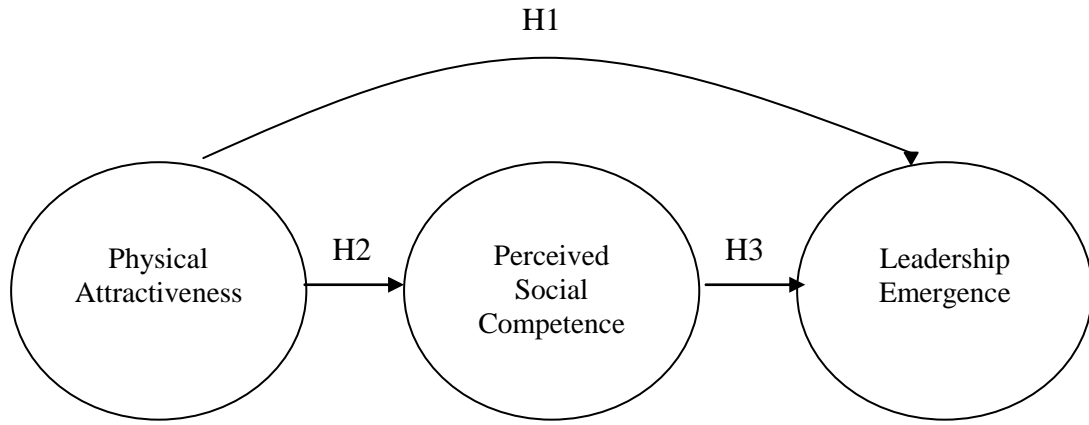


Figure 1

Figure 1 displays my research model.

CHAPTER II

METHODS

Identification of Studies

I conducted an extensive electronic search using the PsycInfo database to identify published articles that examined the relationship between physical attractiveness and leadership emergence. I also performed a Google Scholar search to look for additional papers, and followed article trails throughout various databases (EBSCO, Web of Science, ABI/Inform, Dissertation Abstracts). The search was conducted by using physical attractiveness as the key search term paired with the following terms: personality, competence, intelligence, extraversion, dominance, core self-evaluation, self confidence, self-esteem, assertiveness, leadership, leader emergence, management, leader potential, nomination, voting. Additionally, the following meta-analyses on physical attractiveness and other job and non-job related outcomes were searched for additional primary studies: Barrick, Shaffer, & DeGrassi (2009), Hosoda, Stone-Romero, & Coats (2003), Judge & Cable (2004), Jackson, Hunter, & Hodge (1995), Eagly, Ashmore, Makhijani, & Longo (1991), Langlois, Kalakanis, Rubenstein, Larson, Hallam, & Smoot (2000), and Feingold (1992).

Inclusion Criteria

For a study to be included in the present review, it had to meet the following criteria. First, the article had to report enough data (either experimental effects or correlations) in order to calculate an overall correlation between physical attractiveness and leader emergence. Second, the study had to be based on an adult sample. This inclusion criterion resulted in a final set of 11 articles representing 18 independent samples, all of which came from published studies.

Coding Procedures

To conduct the meta-analysis, I coded for the following elements in each study: effect sizes, variables (physical attractiveness, leader emergence, and social competence), measurement reliabilities (coefficient alpha), male or female leader targets (i.e., the individual actually emerging as a leader), male or female leader raters (i.e., the person allowing the leader to emerge), study setting (field or lab), and sample size. In order to ensure coding accuracy and reliability, I worked with a team of three individuals to code all studies and resolved disagreements as they arose.

Meta-Analytic Techniques

A meta-analysis was chosen to capture this relationship because “it is able to draw overall, sound conclusions (i.e. state principles) from a large number of studies (often over 100) and usually thousands of subjects. Instead of just choosing one study here or there to support (or not support) a statement, meta-analysis provides a quantitative summary of individual studies across an entire body of research knowledge on a given concept (e.g. conscientiousness or self efficacy) or technique (e.g. job characteristics model or organizational behavior modification)”(Luthans, 2005, p. 27).

In this study, I used Hunter and Schmidt’s (2004) psychometric meta-analysis methods to estimate the “true-score” relationships. The Hunter and Schmidt method corrects both for sampling error and measurement error. To correct for sampling error, studies were weighted by sample size. To correct for measurement error, I used the alpha reliability coefficient, which

measures consistency in responses, whenever it was reported in the original study. When the alpha coefficient was not given, I input the mean alpha value for the construct being captured.

CHAPTER III

RESULTS

Table 1 reports the meta-analytic relationships of physical attractiveness, social competence and leadership emergence. In particular, I report the following figures: number of independent samples (k); combined sample size (N); mean sample size corrected observed correlation (r_c), and measures of variability, including the 80% credibility intervals and 95% confidence intervals around the mean true score correlations. If the 95% confidence interval (CI) for a given effect size excludes zero, then it can be assumed that the mean true correlation is meaningfully different than zero (i.e., statistically significant). If the 80% credibility interval (CV) around a positive (negative) correlation excludes zero, then it can be assumed that at least 80% of the possible individual correlations in a given population of studies will be greater than (less than) zero, leading to the generalizability of a positive (negative) relationship.

Hypothesis 1 was supported as there was a moderate positive relationship ($r_c = .28$) between physical attractiveness and leadership emergence, with neither the 95% CI nor the 80% CV including zero. Hypothesis 2 was likewise supported as there was a strong positive relationship ($r_c = .63$) between physical attractiveness and perceived social competence. Again, the 95% CI and 80% CV for this relationship did not include zero. Finally, Hypothesis 3 was supported as there was a strong positive relationship ($r_c = .49$) between perceived social competence and leadership emergence (the 95% CI and 80% CV did not include zero). In addition to being shown in Table 1, these results are also shown in Figure 2.

In terms of my research questions, Table 2 reports the meta-analytic relationship between physical attractiveness and leader emergence categorized by leader (target) gender. Once again, I report the number of independent samples (k), combined sample size (N); mean sample size corrected observed correlation (r_c), and measures of variability, including the 80% credibility intervals and 95% confidence intervals around the mean true score correlations—only in this case, I do it across leader (target) gender. If the 95% CIs for the corrected observed correlation do not overlap, then it can be assumed that the true correlations are meaningfully different from one another. Since the confidence intervals for the corrected observed correlations in Table 2 overlap, this means that physical attractiveness is not relatively more important for either male or females emerging as leaders. Table 3, however, reports the meta-analytic relationship of leader emergence due to physical attractiveness categorized by rater gender, and shows that the relationship between physical attractiveness and leader emergence is stronger for male vs. female raters. In other words, since the confidence intervals of the corrected observed correlations do not overlap, the answer to Research Question 2 is that male raters anchor more on physical attractiveness in making decisions regarding leader selection and potential.

Table 1Physical Attractiveness and Perceived Social Competence to Leader Emergence

	1	2	3
1. Physical attractiveness	—		
2. Social competence		—	
r_c	.63	—	
(95%CI)	(.49, .76)	—	
(80%CV)	(.50, .76)	—	
k(N)	4 (302)	—	
3. Leader emergence			—
r_c	.28	.49	—
(95%CI)	(.19, .37)	(.39, .60)	—
(80%CV)	(.12, .44)	(.34, .64)	—
k(N)	13 (993)	9 (556)	—

Note. CI = 95% confidence interval around the population correlation; r_c = population correlation corrected for unreliability; CV = 80% credible interval around the context of the posterior probability distribution; K = number of studies; N = total sample size.

Table 2

Rate of Physically Attractive Leaders Emerging based on Gender		
	1	2
	Male Leaders	Female Leaders
r_c	.30	.16
(95% CI)	(.19, .40)	(-.08, .40)
(80% CV)	(.22, .38)	(-.05, .37)
k(N)	6 (367)	3 (180)

Note. CI = 95% confidence interval around the population correlation; r_c = population correlation corrected for unreliability; CV = 80% credible interval around the context of the posterior probability distribution; K= number of studies; N= total sample size.

Table 3

Impact of Physical Attractiveness on Rater Choice based on Gender

	1	2
	Male Raters	Female Raters
r_c	.43	-.08
(95% CI)	(.29, .57)	(-.25, .10)
(80% CV)	(.43, .43)	(-.08, -.08)
k(N)	3 (181)	3 (128)

Note. CI = 95% confidence interval around the population correlation; r_c = population correlation corrected for unreliability; CV = 80% credible interval around the context of the posterior probability distribution; K= number of studies; N= total sample size.

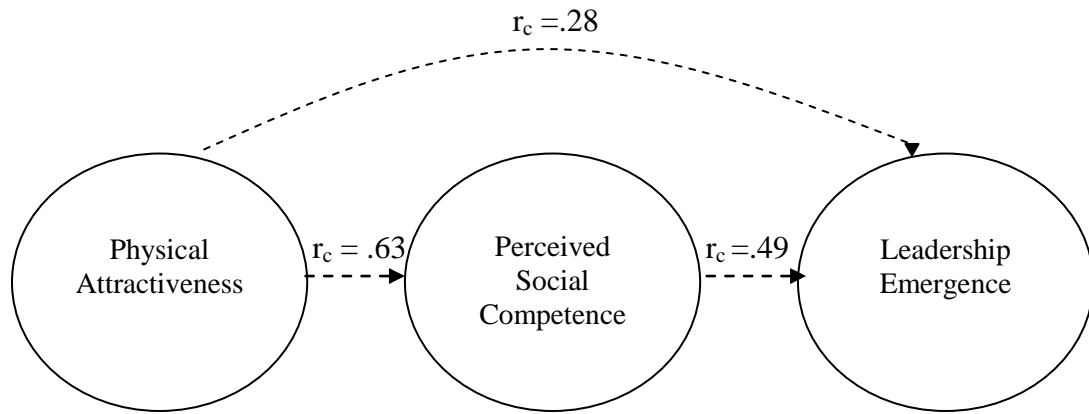


Figure 2

Figure 2 displays the population correlation corrected for unreliability of each hypothesis in my research model.

CHAPTER IV

CONCLUSION

The purpose of this research was to develop an understanding of the relationship between physical attractiveness and leadership emergence, and the perceived biases that help explain this relationship. Results of this meta-analytic review showed positive relationships between physical attractiveness, perceived social competence, and leader emergence. Additionally, the research showed that male raters anchor more on physical attractiveness in decisions involving leader potential and selection, but for male and female leaders themselves, physical attractiveness was equally important for being selected as a leader.

This research contributes to the scholarly literature on personality and leadership by examining and defining the exact magnitude of the link between physical attractiveness and leadership emergence. While physical attractiveness has been studied at large, its impact on leadership emergence has had mixed findings. Thus, a quantitative summary across this body of research knowledge clarifies these previous mixed findings. Additionally, this research identifies a key variable that explains the linkage between physical attractiveness and leadership emergence. Specifically, physically attractive individuals are perceived as more socially competent; thus, they tend to emerge more as leaders. This finding offers a new insight into the explanation of the bias of physical attractiveness and highlights the differences between the trait theory of leadership and ascription-actuality trait theory.

Despite its contributions, it is important to note that there are certain limitations to this study.

First, this thesis is the beginning portion of a larger project and should be considered as a work in progress rather than final results. In particular, a relatively small number of studies have been included in the meta-analysis, especially in the male-female analysis, and as the research continues more studies will be collected and included. In addition, perceived social competence is the only explanatory mechanism explored in this research. Other perceived traits such as cognitive ability or extraversion should be studied that may also explain the relationship between physical attractiveness and leader emergence.

However, notwithstanding its limitations, the findings of this study have a number of implications for practitioners. Specifically, since this research is focused on adult populations in regards to situations involving leadership, findings in this study can be applied to persons in the role of hiring or promoting individuals to leadership positions. These persons should be aware of personal biases due to physical attractiveness that could influence their decisions in selecting leaders. They must be aware that they may be inclined to choose leaders because they are attractive and are thus perceived as more socially competent, when in fact this may not be the case. Based on my findings, this warning may be particularly helpful for males who find themselves in the role of hiring or promoting individuals to leadership positions. Overall, individuals choosing leaders need to more fully understand their own biases that play into decision-making processes regarding the selection of leaders.

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Note: * denotes included in meta-analysis.