

The Effects of Posture on Self-Perceived Leadership

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Abstract

Humans express and perceive the moods and thoughts of others through the posture that they exhibit. But can the postures individuals maintain determine their own leadership perceptions? The results of this study confirmed the prediction that posing in a positive, upright posture lead individuals to rate themselves higher in leadership than posing in a negative, slouched posture. Participants (N = 42) who posed in the positive posture consistently chose seats closer to the head of the table on a chair circling task while participants in the negative posture condition chose seats further from the head of the table, indicative of a lesser sense of leadership. These findings suggest that embodiment extends into cognitive processing; effecting the thoughts and feelings an individual has concerning his or her leadership. Maintaining an upright position may bolster individual leadership perceptions before important interviews, meetings, tasks, and decisions.

Keywords: posture, leadership, embodied cognition, embodiment, mind-body connection

1. Introduction

Social perception is a part of everyday life as individuals assess the meanings behind smiles, shrugs, and other body language. Body positioning or posture is one major element which helps us to detect the emotions, intentions, and attitudes of others. Mood often determines the bodily positions that an individual exerts, and many assumptions can be made about an individual according to their nonverbal language. Individuals may attribute one's body position to disposition, character, or intellect. These common stereotypes and personal beliefs have been validated through studies of nonverbal behavior. The current study examines the relationship between manipulated body posture and self-perceived leadership.

High powered individuals are seen as engaging in more eye contact, being more open and expansive in body movement, and having a more erect posture and more forward lean (Carney, Hall, & LeBeau, 2005). In addition to posture, height has also been linked to role power, strength, and aggression (Quaquebeke & Giessner, 2010; Young & French, 1998). Powerful people even tend to overestimate their height (Duguid & Goncalo, 2012). Perceptions of dominance reach beyond a cognitive level by effecting individuals' decision making in real-life situations. Posture has proven to be a key element of nonverbal behavior that plays into how individuals are perceived. Erect posture is often associated with those who possess high power; people who adopt an expansive posture often act as if they are in charge (Carney, Cuddy, & Yap, 2010) or are perceived by other people to have power (Carney et al., 2005).

In addition, research has found that expansive or upright postures cause power-related feelings, cognitions, and behavior (Riskind & Gotay, 1982). Carney et al. (2010) found that expansive postures also led to changes in hormone levels normally associated with high rank. Those individuals who posed in expansive postures reported feeling more powerful, chose riskier gambles, and had higher testosterone than those in constrictive postures. This research shows that expansive posture leads to perceptions, behaviors, and even physiological responses that are associated with individuals who have role power. Adopting an expansive posture also has effects upon cognitive processing and led to individuals generating more power-related words on a word completion task than those who maintained a constricted posture (Huang, Galinsky, Gruenfeld, & Gilroy, 2011). Research also points out that an upright posture could have certain advantages to a positive situation.

When outcomes are positive, an upright posture guides an individual to exhibit tendencies such as seeking positive information about the self to confirm the inference that one has strengths (Mischel, Ebbsen, & Zeiss, 1973). Whether slumped or upright postures serve as self-defeating or beneficial moderators depends upon whether they are matched or mismatched with the outcome received by the individual, be it success or failure. This may be due to the fact that people are more likely to spontaneously adopt an expansive posture after success while they are more inhibited to adopt a slumped posture after failure (Riskind, 1984). This tendency shows that there are connections between the mind and the body.

The extent to which physical behaviors influence the mind is greatly debated, but recent findings are beginning to indicate more complexities in the relationship between the mind and the body than have been previously presumed. The evidence for this complex connection can be found in the concept of embodied cognition. Where it is obvious that actions are a response to mental activity, recent research of embodied cognition has shown that the body too might influence the mind to a greater degree than has previously been recognized. The basic idea of this new finding is that memories and cognitive information are composed of experiences that are not only stored in the mind but also in the body. What one “remembers” about a situation is conjured up by the mind but also by the unique experiences stored by the body including certain bodily positions, movements, and sensations. The information stored by the body is so strong that it can bring about certain cognitions and emotions just as the same cognitions and emotions can elicit the body to respond; the mind and body work together seamlessly. Merely imitating a bodily action that is a result of thought processes can provoke ease of accessibility to those very thoughts; the body is a powerful influencer to the mind (Barsalou, 2008).

Building upon the research which confirms that cognition is embodied, Hung and Labroo (2011) proposed that the body is also instrumental in self-regulation, particularly willpower. Across five studies, the researchers showed that firming or flexing one’s muscles can help to firm or strengthen the individual’s willpower. This was evident in the participants’ ability to withstand pain, overcome temptation, consume unpleasant medicines, and attend to disturbing yet essential information, as long as they considered these actions to provide a long-term benefit. The findings of this study are referenced through metaphors expressed in spoken language associated with overcoming challenges. One may associate pumped fists and clenched jaws with endurance, and people fighting for self-control may tell themselves to “hold on to” that last bit of willpower. The study proved, through embodied cognition, that physically holding on or clenching to an item is just as effective at producing increased willpower as any mental technique.

The concept of embodied cognition, along with the previous research detailing the connections between posture and power or leadership, supports the hypothesis of the current study. Posture, as it is connected to role power and positive situations, is predicted to influence perceived self-leadership. Specifically, participants are hypothesized to express leadership more profoundly when adopting a positive posture over adopting a negative posture.

2. Method

2.1 Participants

Forty-two college students from a mid-sized public university in the Southeastern United States participated in the study. Participants varied in age from 18 to 43 with the mean age of 22.43 ($SD = 6.13$). Race of participants included one Asian/Pacific Islander, 10 African Americans, 27 Caucasians, three Latino/Hispanic/Mexican Americans, and one Other who identified as American Indian/Caucasian/African American. The sample consisted of 12 males and 30 females. Participants were recruited from the university’s research participant pool and received research participation credit to satisfy requirements for various psychology courses. All participants were treated in accordance to the American Psychological Association’s ethical guidelines (APA, 2002).

2.2 Materials

The study took place in a psychology laboratory room. Two 8” x 10” color photos of model poses were displayed for the participants to imitate the proper posture positions (see Figure 1). The photos were taken for the purpose of this research, and permission was obtained from the model for their use. Both photos used a 28 year old male model wearing a grey long-sleeved shirt, white pants, and black shoes. The model was shown sitting in a chair against a beige wall, with nothing in the background except the wall. In one photo the model sat with a slumped or negative posture while in the other photo, the model sat with an erect or positive posture with the aid of a lumbar support pillow.

The black lumbar support pillow is composed of wire and mesh, is curved to fit the lumbar portion of the spine, and fits onto the back of any straight backed chair. The lumbar support pillow is widely available and may be purchased at any of several office or retail stores.

The measure of leadership used in the study was a black and white photo of a rectangular table lined with nine total chairs, one at the head of the table and an additional four on each side of the table. The graphic was selected from Microsoft Office 2010's clipart collection and cropped to show only one head of the table. Chair 1 was the head of the table and Chairs 2, 3, 4, and 5 were in parallel positions of both the left and right side of the table, with Chair 5 being the furthest from the head of the table. Participants were instructed to circle the chair in which they would most like to sit as a measure of leadership, with the assumption those who perceived themselves as strong leaders would sit at the head of the table or in a chair close to the head of the table, whereas those who did not perceive themselves as strong leaders would choose to sit further away from the head of the table. The chair circling survey was pilot tested with a group of 38 college student participants by asking them to circle the chair which the leader would occupy during a meeting. In this pilot study, an overwhelming majority of participants (94.7%) chose the chair at the head of the table as the leader's chair.

The next measure included in the questionnaire packet was designed to create the illusion the study was about marketing research. This "BackEeze Marketing Research" was simply a manipulation to deter participants from arriving at the actual purpose of the study. The marketing research questions included how much the participant would pay for a BackEeze support pillow, if they would recommend it to friends, and where they might use the lumbar support pillow. Demographic questions included age, sex and race.

2.3 Procedure

Participants used an online experimental management system to sign up for participation in the study. Upon arriving at the lab for individual testing, participants were assigned to either the positive or negative posture group using a random set of numbers generated by randomizer.org. The number 1 specified the positive posture condition while the number 2 identified the negative posture position. Participants were greeted and asked to have a seat in a chair either with (positive) or without (negative) a lumbar support pillow. The participants were given a questionnaire packed and were asked not to turn over the questionnaire packet until further instruction was given. The participant was then shown a picture of either the positive or negative posture and asked to assume the respective position. The researcher held the picture upright while reading either of the following instruction sets: *For the positive condition*: "Take a look at this picture and model the pose that you see. Be sure that your buttock is as far back in the chair as possible and that your legs are at a ninety degree angle. Place your hands flat on the outside of your legs, and raise your shoulders so that they are tall and square. Face forward being sure that the bottom of your chin is parallel to the floor." *For the negative condition*: "Take a look at this picture and model the pose that you see. Be sure that your buttock is about halfway to the front of the chair and that your legs are at a forty-five degree angle. Place your hands towards the inside of your legs, and drop your shoulders so that they are slouched and your back is hunched. Tilt your head downward as if you were looking at the floor." After the researcher assured that the participant was modeling the posture correctly, the participants were asked to hold the position for one minute. A stopwatch was used to time one minute, and after the time had passed the participant was given permission to turn the questionnaire packet over and begin the survey process.

For those in the negative posture condition, the following line was added to the top of the page containing the BackEeze marketing research: "Please notify the student researcher when you reach this point." After being notified by the participant, the researcher asked the participant to stand so that the BackEeze lumbar support pillow could be added to his or her chair. The pillow was added to the chair and the participant was instructed to take a moment to get comfortable and continue to the end of the packet. After completing the entire packet, participants were read a debriefing statement and dismissed from the laboratory.

3. Results

A Chi-square test for independence was conducted to determine if there was a relationship between the positive and negative posture conditions and chair choice on the chair circling task. This test found that there was a relationship between the conditions and chair choice, $\chi^2(4, N = 42) = 11.72, p = .02$. On the chair circling task, 28.6% of the individuals in the positive posture group chose the chair at the head of the table (Chair 1) as compared to only 14.3% of those in the negative posture group.

The difference in percentages of individuals who chose Chair 2 were 42.9% for the positive posture group and only 9.5% for the negative posture group. These results are presented in Figure 2.

Additionally, chair position could be considered a continuous measure on a 5-point Likert scale where Chair 1 (head of the table) represented highest perceived leadership and Chair 5 represented lowest perceived leadership. An independent means *t*-test was conducted to determine if there was a difference between the positive posture and negative posture conditions. Similar to the chi-square results, there was a significant effect for posture, $t(40) = 3.28$, $p = .002$, $d = 1.02$, as measured by the chair circling task. Those in the positive posture condition ($M = 2.05$, $SD = .86$) chose seats closer to the head of the table than those in the negative posture condition ($M = 3.10$, $SD = 1.17$).

4. Discussion

The findings of the present study confirmed the prediction that individuals who exerted a positive posture would rate themselves higher in leadership than those in the negative posture condition. Participants in the positive posture condition consistently chose the chair at the head of the table or those nearby rather than choosing those further along either side of the table. No one in the positive posture condition circled any chair higher than Chair 4. These findings further the case for the mind-body connection and indicate that body posture has effects upon cognition.

The chair circling task completed by participants was selected by the researcher specifically for this experiment. It was formulated by considering the stereotypes held about the relationships between leadership and seating. Situational cues, such as seating arrangement, aid in identifying individuals in leadership or power positions at a table. Much research in the past has confirmed that the end, or head, seat of a rectangular table is associated with leaders more so than those seats along the sides of the table. Studies have also shown a “halo effect” of advanced status leadership to be associated with the head of the table in same sex and mixed sex groups. Regardless of sex, participants rated individuals seated at the head of the table as having more leadership qualities and contributing most to the group (Jackson, Engstrom, & Emmers-Sommer, 2007). Results of the pilot test conducted for this study yielded similar findings to the past researchers concerning leadership and seating arrangements.

While interesting, the generalization of the results of this study is limited and further investigations are recommended. The sample consisted solely of college students and participant sex was not included as an independent variable, due to the small sample of males in the study. Although no interactions among sex were analyzed, a few males in the study who were assigned to the negative posture condition often still chose the leader Chair 1. This is consistent with findings of Burgess and Kaya (2007) who examined the interactions of sex with seating preferences in college classrooms. The study found that male students express greater feelings of ease than females in U-shaped and in rowed seating layouts which are characterized by individual chairs. Choosing the individual or leader chair on the chair circling task may reflect the instinctual leadership attitudes of the male population. It would be useful to test other populations, because this study is applicable to those in the field of business and may yield more consistent results when issued to those who have held numerous leadership positions in the past. It would also be interesting to study this effect across cultures to determine if there are any significant differences in seating preferences by culture, independent of any manipulations.

This study is important to the field of social psychology concerning nonverbal expression and can lead to new insight on how one’s postural choices may influence their behavior. Past studies have shown similar links between posture and cognition, specifically in the areas of motivation and emotion. Riskind and Gotay (1982) found that participants who had been placed in slumped physical posture later appeared to develop helplessness, as measured by lack or persistence on a standard learned helplessness task, more readily than did participants who had been placed in an upright posture. Additionally, the previous study found that participants placed in a hunched posture verbally reported self-perceptions of greater stress than participants who were placed in a relaxed position. This indicated the importance of maintaining a positive posture to regulate feelings of confidence and ease, two key components of leadership.

The information gathered from the current study can be used to further stress the importance of maintaining an upright posture in situations when one has a need to appear as having strong leadership skills. In addition, posture may now be seen as a factor to be used to modify one’s perceptions of his or her own leadership.

During a job interview, when giving a speech, when talking to superiors, or in other situations which can be intimidating, maintaining a positive posture may lead one to hold higher regards for their own leadership abilities and may aid in his or her eventual success. This study adds to the literature of embodied cognition which has the power to influence the ways people think about their bodies and minds working together as an integral unit of self-expression and self-awareness.

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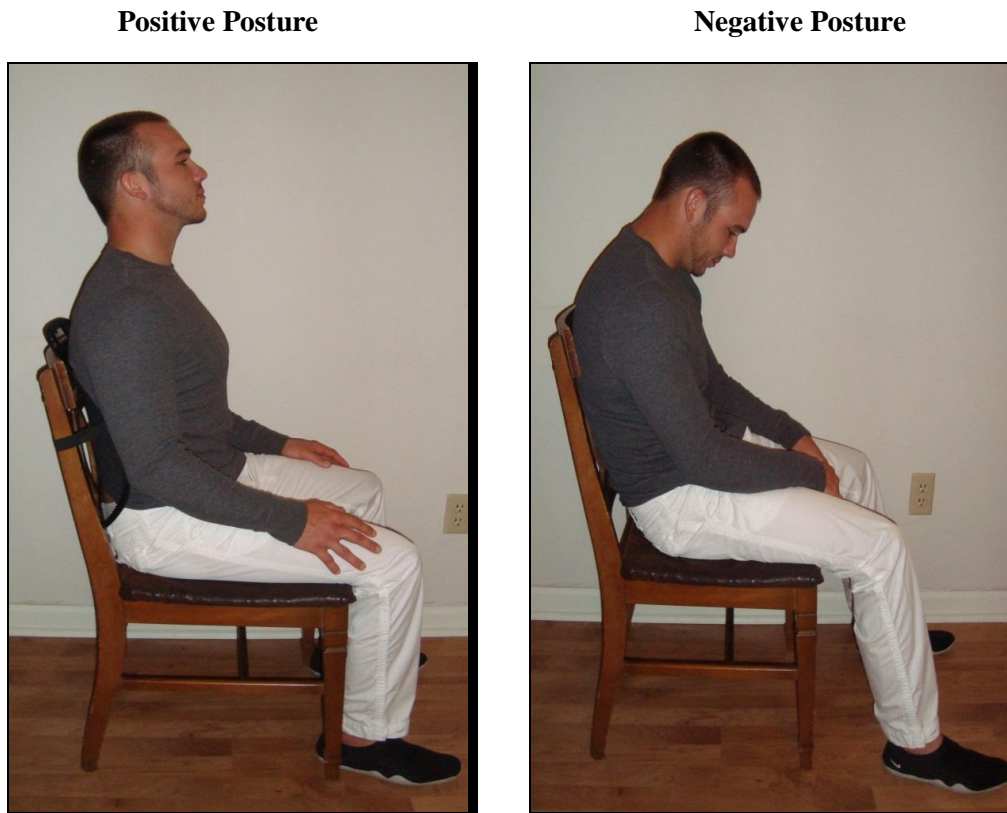


Figure 1. Positive and negative posture models.

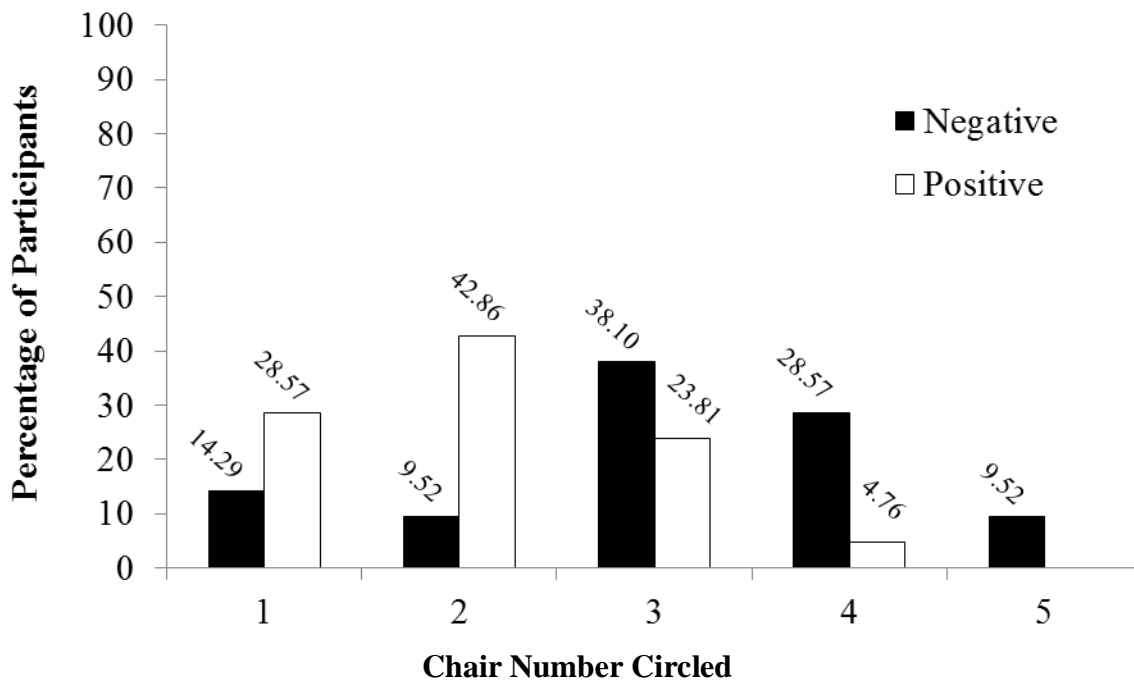


Figure 2. Percentages of participants choosing each chair number position across posture conditions. Chair 1 was at the head of the table and Chair 5 was the furthest from the head of the table.