

Dressed to Influence: The Effects of Experimenter Dress on Participant Compliance

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Abstract

Some psychologists believe that, in addition to any independent variable being tested, the characteristics of the experimenter who is conducting the study can influence how participants will perform during experiments, a phenomenon sometimes referred to as experimenter bias. Participants in this experiment consisted of 67 California State University, Northridge students. In this double-blind procedure, participants were randomly assigned to follow directions from either a casually or professionally-dressed experimenter. The authors predicted that participants in the professionally dressed condition would follow directions more accurately, but results indicated that participants who received directions from a casual experimenter were more compliant. It may be that students follow directions more accurately when those directions are given by someone who is dressed more similar to themselves.

Keywords: clothing, compliance, experimenter bias, social influence, dress style

Dressed to Influence: The Effects of Clothing on the Accuracy of Following Directions

A business-like appearance is often thought to be a prerequisite to success in many societies, especially for those people who work in professional careers (Peluchette & Karl, 2006). Employees may believe that dressing professionally indicates to coworkers that they are motivated, skilled, hardworking, and serious about their workplace responsibilities (Peluchette & Karl, 2006). Dress has also been shown to influence hiring decisions during job interviews (Forsyth, Drake, & Cox, 1985). Just as many businesses prefer professionally dressed employees, many social scientists prefer that their research assistants dress professionally, and some have even suggested that attire be used as a selection criterion when recruiting undergraduate research assistants (Lechango, Love, & Carr, 2009). Given that researchers may feel pressure to dress in a predetermined way when interacting with participants in a research environment, it is important to better understand how dress may influence behavior in controlled laboratory settings where researchers work hard to minimize confounding variables. In this study, we examined how manipulating the professional attire of a researcher in a psychology experiment influenced the accuracy by which participants would follow directions.

Researchers have long been interested in how a person's appearance can affect other people's behavior towards that person. Bickman (1974) found that people are more compliant when dealing with an authority figure, and Bushman (1984, 1988) found that participants were quicker and more likely to comply with firefighters and police officers whose dress was perceived as authoritative. Changes in interpersonal behavior on the basis of dress may be caused in part by the *authority principal*, the principle that people are more willing to comply with directions given from people who are perceived to be authority figures (Cialdini & Rhoads, 2001). Thus, a police officer in uniform is perceived by people as more authoritative than one

who is not, and as a result, people will comply with directions from a uniformed officer more readily.

One factor that complicates how dress influences perceptions is that people appear to have expectations about how professionals should dress that vary from one profession to another. For example, Leff, Nydegger, and Buck (1970) found that people perceived nurses as less caring when dressed casually, while Stillman and Resnick (1972) found that there was no difference in the willingness of people to disclose information to counselors based on professional or casual dress patterns. A study by Morris, Gorham, Cohen, and Huffman (1996) found that college instructors were rated best when dressed highly casually as opposed to highly professional. A recent study by Lill and Wilkinson (2005) found that patients preferred doctors who wore traditional white laboratory coats more than when the doctors wore blue jeans, but preferred a semi-formally dressed doctor the most of all. Thus, the potential benefits for professional dress may depend both on how the person expects a competent practitioner of that field to appear, and whether strict compliance via the authority principle is desired.

In the social sciences, the potential influence of the experimenter is often controlled for to try and minimize any effect that the researchers might unintentionally have on participants' behavior as they perform an experiment. This sometimes includes formal or informal guidelines regarding how researchers or research assistants should dress. The exact rationale for establishing a particular laboratory's dress code may differ, but at least some research shows that student assistants who are professionally dressed are perceived more favorably and as more competent than their casually dressed counterparts (Roach, 1997). Furthermore, it is often imperative in social science research that participants follow precise directions carefully, and therefore some researchers may prefer formal dress because of past research that shows that

professional dress increases participants' levels of compliance (Kleinke, 1977). Thus, the director of a laboratory may reasonably assume that professionally-dressed research assistants will be perceived by participants as more authoritative, thereby increasing the participants' compliance with the researcher's instructions, resulting in participants who more accurately follow directions.

This experiment was designed to test how manipulating the dress of a student research assistant from more casual to more professional would influence participants' accuracy in following directions. The goal of the study was to better inform researchers about how they should dress when getting participants to follow directions that are important. To do so, we asked students to follow a series of directions given by a researcher who was either dressed professionally or casually. On the basis of past research, we predicted that participants who received the directions from the professionally-dressed researcher would comply more with the researcher, thereby following the directions in the study more accurately.

Method

Participants

Participants in this experiment consisted of 67 students from California State University, Northridge. All of the students who participated were undergraduate students, and were given one unit towards their degree to participate in the experiment. Forty-nine females and 18 males participated in this experiment. Participants ranged in age from 19-27, and they were selected at random from a participant pool where 96% were between the ages of 18-25. Although no information about ethnicity was collected, descriptive statistics from the Northridge participant pool show that approximately 39% of participants are Hispanic, 30% are Caucasian, 12% are

African-American and 9% are Asian. Thirty-two participants were randomly assigned to the professional dress condition and 35 were assigned to the casual dress condition.

Materials

Materials used in this experiment were one highlighter, a blue and black pen, two DVD's, a DVD player, and a television. Each student was provided with a highlighter and blue and black pen to fulfill the requirements of completing a directions test (see Figure 1).

Insert Figure 1 about here

In order to control how directions were given to participants, two DVD recordings were made of the same actor, dressed in either casual or professional clothing (see Figure 2). The actor was a 22-year-old female college student. The actor was asked to read from a script of directions twice, once while wearing professional attire and once while wearing casual attire. Care was taken to direct the actor to read the script with the same emphasis and pace in both recordings, making both recordings nearly identical in length. The actor was blind to any of the details or theories being tested by the experiment to avoid any experimenter bias.

Insert Figure 2 about here

Manipulation Check

In order to ensure that students interpreted the casual and professional dress style of the actor as we intended, a between-participants manipulation check was conducted where 40 students from a research methods course watched either the professional or casual-dress videos,

and then indicated how professional or casual they thought the attire of the experimenter was on a scale of 1 (*casual attire*) to 5 (*professional attire*) using an empirically-grounded questionnaire adopted from Cardon and Okoro (2009). As intended, an analysis using an independent samples *t*-test confirmed that students perceived the professionally-dressed experimenter as more professional ($M = 2.73, SD = .99$) than the casually dressed experimenter ($M = 1.45, SD = .74$); $t(39) = 4.74, p < .001$.

Procedure

Using a between-participants design, participants were randomly assigned to one of the two levels of the independent variable tested (dress: casual or professional) upon arriving to the testing location. The experiment employed a double-blind procedure whereby an initial experimenter met participants outside the test area and randomly assigned them to a condition, while secondary experimenters inside the test area were blind to which condition each participant was assigned to. All the experimenters had minimal contact with the participants except to seat them and then begin one of the two video recordings. When participants entered the laboratory, an experimenter read from a short script to inform participants that they would be watching a video that detailed directions about the experiment. Then one of the two videos was played where the actor gave directions to participants to: 1) use a blue pen, 2) write their age and gender (in blue pen), 3) read all the instructions on the test before beginning the test, 4) turn their papers over when done, and 5) leave the test on the desk. The only difference between the videos was the dress of the actor who read them.

After the participants finished viewing the recording, they were instructed to see one of the experimenters to receive their one unit of credit and a detailed debriefing form. Once

participants had left the lab, the researchers recorded how many of the directions had been followed correctly.

Results

To test for differences in direction-following behavior between conditions, participants' first received one point for every direction they followed correctly, for a total of five possible points. We hypothesized that participants in the professional condition would follow directions more accurately than participants in the casual condition. The data collected was analyzed using an independent samples *t*-test. Our results revealed that participants in the professional dress condition ($M = 1.06$, $SD = 1.01$) followed directions *less accurately* than the participants in the casual dress condition ($M = 2.17$, $SD = 1.34$); $t(66) = 3.79$, $p < .001$. Put differently, these results indicate that participants in the casual dress condition followed directions more accurately than participants in the professional dress condition. Table 1 separates the percentage of participants who correctly followed each of the directions, illustrating the reliable overall effect.

Insert Table 1 about here

Discussion

The results of this experiment did not support the hypothesis that participants would follow directions with greater accuracy when the directions were delivered by an experimenter who was dressed professionally. In fact, the opposite was found to be true; participants in the casual-dress condition correctly followed more of the actor's directions by a ratio of more than two to one. These results were found to be surprising, especially in light of the seemingly

contrary findings by Bickman (1974), Bushman (1984, 1988), and Leff, Nydegger, and Buck (1970).

Why did participants in this study follow the directions of an experimenter more accurately when the actor was dressed more casually? One possible interpretation of these results would be that the casually dressed actor made the participants feel less anxious about their participation in the study, thereby increasing those participants' abilities to follow directions more closely. Studies of anxiety show that anxiety can impair performance on academic exams (Cassady & Johnson, 2002), increase automobile driving errors (Taylor, Deane, & Podd, 2007), and can decrease interactions with counselors (Hubble & Gelso, 1978). It may be true that participants who are participating in experiments feel anxious about what might happen to them during the experiment. Recent research has demonstrated how easily anxiety can be induced in students with a resulting decrement in performance. For example, when students are shown the word 'red' prior to taking a test, they associate the word with corrective ink, thereby increasing anxiety and reducing intellectual performance (Lichtenfeld, Maier, Elliot, & Pekrun, 2009). Thus, similar increases in anxiety on the basis of professional dress may have created the effects we report here. We encourage future researchers with interests in the effects of dress and compliance to test for increases in anxiety.

A second interpretation may also help us understand why participants followed directions more accurately with a casually dressed experimenter. The three previous studies mentioned in the introduction that are most similar to this current study (Bickman 1974, and Bushman 1984, 1988) were the basis of the research design. All are over 20 years old. It may be that with the change in time, various social influences like style of dress and acceptance of a more casual dress style may be the basis of change in results from previous research to this current study.

Examples of this research include the findings of Morris et al. (1996) where a preference for a casual counselor was indicated. Even though Peluchette and Karl (2007) found that employees believe dressing professional is attributed to good work ethics, employees prefer a more casual work place. With a change in time, comes change in the people that participate in laboratory experiments. We strongly encourage other researchers to look further into this interpretation of our results because all research has to be in tune with changes in society, even with something as simple as dress style that may be overlooked.

Other theories might also explain our results. For example, it could be that it was not the casual dress of the experimenter per se that reduced anxiety, but rather, it was the similarity between participant and experimenter dress that did so. Perhaps the participants in our study felt that they were better able to relate to the experimenter in the casual-dress condition, thereby lowering their anxiety and increasing their ability to follow directions correctly. If this is the case, then it might make more sense for psychologists to try to recruit student researchers who are of similar age and appearance to the participant population being examined. Another explanation for the findings could be that there was a stronger participant reaction bias in the professional condition whereby students felt inclined to rebel against the professionally-dressed experimenter by intentionally not following directions.

Ultimately, more research is required to disentangle why participants followed the directions of the casually dressed experimenter more accurately. Regardless of the cause of the effect, the findings do urge some caution before strict professional dress codes are adopted in psychology laboratories. Although professional dress may be common and appropriate in business settings, it may be increasingly less so in classrooms and psychology laboratories. Therefore professional dress may exacerbate participant anxiety or create perceived differences

between the researcher and experimenter that results in less-accurately followed directions. As noted by Morris et al. (1996), fashion has changed since many of the studies on dress were conducted, and it may be true that potential anxiety responses based on the comparative dissimilarity between the dress of an average participant and a professionally-dressed experimenter have, and will continue, to increase. On the basis of these findings, we suggest that psychologists advise students to dress professionally when presenting research and when applying for research positions, but that researcher's should think twice before requiring professional dress in laboratory settings.

References

- Bickman, L. (1974). The social power of a uniform. *Journal of Applied Social Psychology, 4*, 47-61. doi: 10.1111/j.1559-1816.1974.tb02807.x
- Bushman, B. J. (1984). Perceived symbols of authority and their influence on compliance. *Journal of Applied Social Psychology, 14*, 501-508. doi: 10.1111/j.1559-1816.1984.tb02255.x
- Bushman, B. J. (1988). The effects of apparel on compliance: A field experiment with a female authority figure. *Personality and Social Psychology Bulletin, 14*, 459-467. doi: 10.1177/0146167288143004
- Cardon, P. W., & Okoro, E. A. (2009). Professional characteristics communicated by formal versus casual workplace attire. *Business Communication Quarterly, 72*, 355-260. doi: 10.1177/1080569909340682
- Cassady, J. C., & Johnson, R. E. (2002). Cognitive test anxiety and academic performance. *Contemporary Educational Psychology, 27*, 270-295. doi: 10.1006/ceps.2001.1094
- Cialdini, R. B., & Rhoads, K. (2001). Human behavior and the marketplace. *Marketing Research, 13*, 8-13. <http://www.imcdfw.org/docs/MarketingResearchJournal.pdf>
- Forsyth, S., Drake, M. F., & Cox, C. E. (1985). Influence of applicant's dress on interviewer's selection decision. *Journal of Applied Psychology, 70*, 374-378. doi: 10.1037/0021-9010-70.2.374
- Hubble, M. A., & Gelso, C. J. (1978). Effects of Counselor attire on an initial interview. *Journal of Counseling Psychology, 25*, 581-584. doi: 10.1037/0022-0167.25.6.581
- Kleinke, C. (1977). Effects of dress on compliance to requests in a field setting. *Journal of Social Psychology, 101*, 223-224. <http://psycnet.apa.org/psycinfo/1978-03334-001>

- Lechango, S. A., Love, J. R., & Carr, J. E. (2009). Recommendations for recruiting and managing undergraduate research assistants. *The Behavior Therapist, 32*, 120-122.
<http://abct.org/docs/PastIssue/32n6.pdf>
- Leff, H. S., Nydegger, R. V., & Buck, M. (1970). Effect of nurses' mode of dress on behavior psychiatric patients differing in information-processing complexity. *Journal of Consulting and Clinical Psychology, 34*, 72-79. doi: 10.1037/h0028788
- Lichtenfeld, S., Maier, M. A., Elliot, A. J., & Pekrun, R. (2009) The semantic red effect: Processing the word red undermines intellectual performance. *Journal of Experimental Social Psychology, 45*, 1273-1276. doi:10.1016/j.jesp.2009.06.003
- Lill, M. M., & Wilkinson (2005). Judging a book by its cover: Descriptive survey of patient's preferences for doctors' appearance and mode of address. *BMJ, 331*, 24-31. doi: 10.1136/bmj.331.7531.1524
- Morris, T. L., Gorham, J., Cohen, S. H., Huffman, D. (1996). Fashion in the classroom: Effects of attire on students perceptions of instructors in college classes. *Communication Education, 45*, 135-148. doi: 10.1080/03634529609379043
- Peluchette, J., & Karl, K. (2006). Dressing to impress: Beliefs and attitudes regarding workplace attire. *Journal of Business Psychology, 21*, 45-63. doi: 10.1007/s10869-005-9022-1
- Peluchette, J., & Karl, K. (2007). The impact of workplace attire on employee self perceptions. *Human Resource Development Quarterly, 18*, 354-360. doi: 10.1002/hrdq.1208
- Roach, K. D. (1997). Effects of graduate teaching assistant attire on student learning, misbehaviors, and ratings of instruction. *Communication Quarterly, 45*, 125-142.
doi: 10.1080/01463379709370056

Stillman, S., & Resnick, H. (1972). Does counselor attire matter? *Journal of Counseling Psychology, 19*, 347-348. doi: 10.1037/h0033076

Taylor, J. E., Deane, F. P. & Podd, J. V. (2007). Driving fear and driving skills: Comparison between fearful and control samples using standardized on-road assessment. *Behavior and Research Therapy, 45*, 805-818. doi: 10.1037/h0028788

Table 1

Directions followed in the professional and casual groups.

Direction	Condition	%
Wrote gender and grade level on test	Professional	42%
	Causal	61%
Wrote in blue pen	Professional	48%
	Causal	61%
Read all steps before writing on test	Professional	19%
	Casual	22%
Turned test over	Professional	0%
	Causal	33%
Left test on desk	Professional	0%
	Casual	33%

Note. % = percentage of participants who followed the direction correctly.

Figure 1. Directions test participants are asked to complete after they watched the video.

Do this test as **RAPIDLY AS YOU CAN**. Read all the steps before you do anything.

1. In step #1, circle the word “rapidly”.
2. In the upper right corner of this paper, draw a square.
3. Write the word “ABOVE” on the top of the paper in black pen.
4. Draw a dash over the numbers 1, 2, and 4.
5. Highlight all of the numbers in step #2.
6. You are not to circle anything in these sentences.
7. Ignore all directions in all of the steps except step #1.

Figure 2. A video screenshot of the actor dressed professionally (left) and casually (right)



