

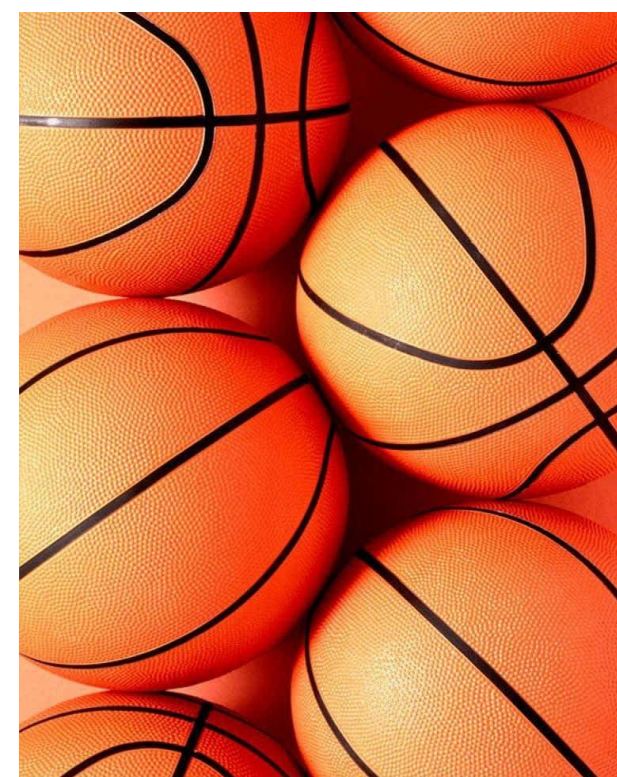
Shooting Hoops: Why Men's Presence Negatively Affects Women's Athletic Performance

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Abstract

Studies show that when a woman is in an all-male setting, her minority status may lead to some cognitive and athletic impairment. We hypothesized that female participants in an all-female condition would shoot more basketballs compared to those in a female minority condition. Forty-three female undergraduates were randomly assigned to all-female or female minority conditions and successful basketball shots were measured. The all-female condition participants had more successful shots than those in the female minority condition. Findings are discussed with respect to stereotype threat and gender equality in sports.



Despite the significant progress women have made toward gender equality, men continue their dominance in many areas. This dominance, whether real or imagined, effectively narrows the career choices for both men and women by suggesting that one gender may be superior in certain skills and dominant in specific behaviors. Unfortunately, some studies have found that this gender categorization starts at an early age. A study by Schmalz and Kerstetter (2006) found that by as early as third grade, young boys and girls differentiate between what are considered masculine sports, such as football, and feminine sports, such as cheerleading. This awareness of gender differences and gender categorization is very likely a result of gender socialization (Chen & Rao, 2011), since there is not a marked gender difference in gross motor development at that age (Larson et. al, 2007).

In relation to gender-characterization and gender differences, Viallon and Martinot (2009) studied gender-based group dynamics and found that the context of the performance grouped with minority status affected both men and women. Studies have theorized that learning deficits were due to a stereotype threat, the underperformance in a specific task due to anxiety caused by internalized negative stereotypes (Inzlicht & Ben-Zeev, 2000). According to Lord and Saenz (1985), being a token minority disrupts an individual's cognitive functioning on group tasks. Thus, a woman's token minority status could result in cognitive impairment in domains especially attributed to men.

However, the question remains whether stereotype threat impacts nonintellectual abilities such as athletic performance, thus hampering real equality in the athletic domain (Beilock, Jellison, Rydell, McConnell, & Carr, 2006; Chalabaev, Sarrazin, Stone, & Cury, 2008). A study by Hardin and Greer (2009) found that participants rated sports, such as basketball and soccer, as more masculine even though both genders play these sports at the collegiate and professional levels. In addition, McCabe (2007) noted that women who played basketball tended to believe that their abilities were inferior to those of men.

If this is the case, the stereotype threat would be expected to appear in basketball shooting skills. The present study sought to observe whether being the gender minority would affect women's performance in the stereotyped male-dominated sport of basketball. It was hypothesized that female participants in an all-female condition would shoot more basketballs successfully into a target than female participants in a female minority condition.

Method

Participants

Participants consisted of 33 female college students ($M_{age} = 19.3$ years) from a private college in northern California. There were 17 women in the all-female condition, and 16 women in the female minority condition. Ethnic composition of participants included the following: nine Caucasians (23.1%), eight Hispanics (20.5%), eight Asians/Asian Americans (20.5%), three African-Americans (7.7%), and 11 of other ethnicities (28.2%). Participants were recruited through announcements made in psychology courses and received course credit for their participation.

Materials

Materials used included two men's league regulation basketballs and a large trash can, which substituted for a basketball hoop. In addition, a short video from youtube.com (2008, September 27) was used, in which a man provided instructions on how to shoot a basketball. Finally, a survey was presented to the participants that included: (1) participant's demographics, (2) past basketball playing experience, (3) level of anxiety while shooting the basketball, and (4) level of comfort during the study.

Procedure

Using random assignment, female participants were placed in either the all-female or female minority condition. Two male confederates were used in the female minority condition and two female confederates were used in the all-female condition. Upon arrival, participants were given brief instructions about the study and asked to fill out an informed consent form. Next, they watched the instructional video clip on how to shoot a basketball. Participants were then told where to stand and informed that they were to shoot as many basketballs into the trash can as they could in 10 tries. Participants were always selected to be the first to shoot, although it was made to appear random. The number of shots was recorded on the survey that the participant was given to fill out in an adjacent classroom.

Results

The hypothesis, that female participants in an all-female condition would shoot more basketballs successfully than female participants in a female minority condition, was examined using an Independent Samples T-Test. There was

Figure 1. Shots made out of 10 attempts in all-female condition

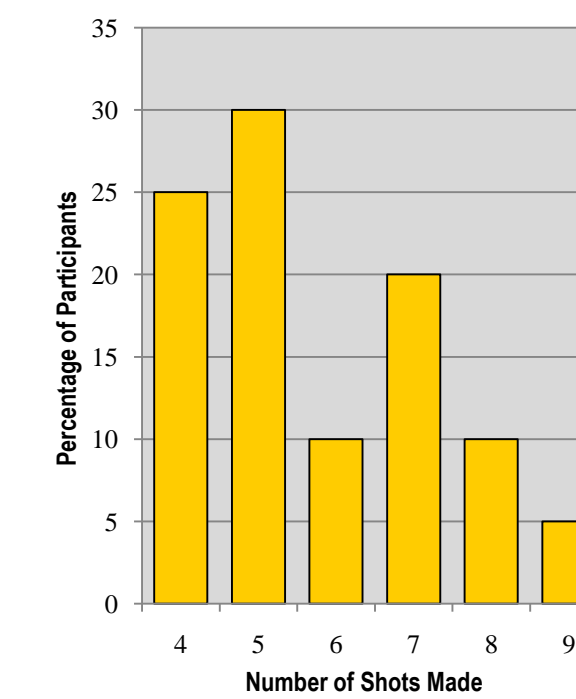
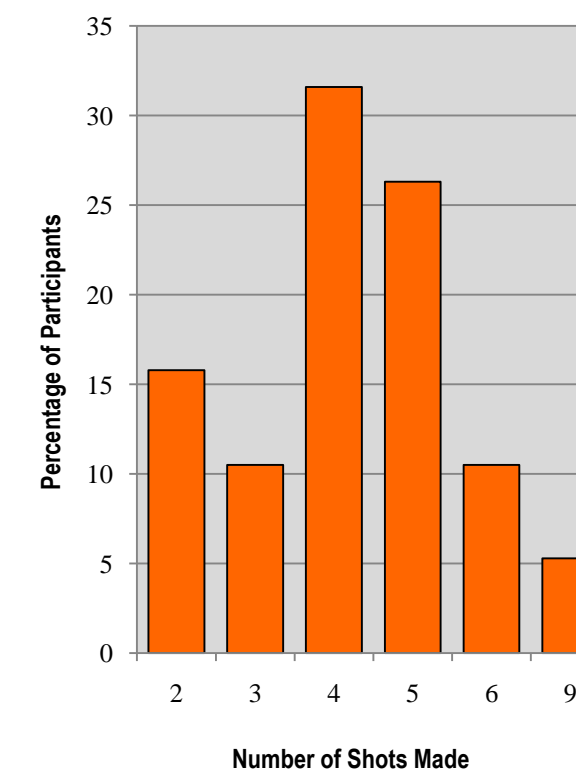


Figure 2. Shots made out of 10 attempts in female minority condition



a significant difference between the groups, with participants in the all-female condition, ($M = 5.75$, $SD = 1.55$) shooting basketballs more successfully than the participants in the female minority condition ($M = 4.32$, $SD = 1.67$), $t(37) = -2.78$, $p = .008$ (See Figures 1 and 2).

Discussion

The results of the study support the hypothesis that female participants would shoot more successful baskets in the all-female condition compared to female participants in the female-minority condition. In addition, the data supports the study's premise that men's presence can have a negative effect on women's performance in the area of basketball, a predominantly stereotyped masculine sport. Furthermore, the results clearly support the implication that women feel a sense of inferiority, due to stereotype threat, when performing stereotypically male-dominated activities such as basketball in the presence of men.

This awareness of gender differences may be a result of early gender socialization at home and in the classroom (Chen & Rao, 2011). With this in mind, perhaps one of the ways to decrease the negative effects of stereotype threat is through early educational intervention. Recent studies have found that educational programs that blur intergroup gender boundaries (Rosenthal & Crisp, 2006) and introduce positive female role models (Marx & Roman, 2002) effectively decrease the negative effects of stereotype threat in stereotypically male activities.

Future studies should consciously introduce the gender stereotype, to see whether or not the emphasized awareness of the threat would affect performance less negatively. Moreover, a more realistic setting might introduce more pressure and subsequently affect performance. For instance, a study might use an actual basketball court, regulation size baskets, and require participants to shoot from the free throw line. In addition, future studies should also examine the development of stereotype threat in young girls to determine whether all-female schools might increase success in academic areas like math and science when there are no boys to reinforce the stereotype threat.

It is clear that the stereotype threat continues to negatively impact women's performance across both cognitive and athletic domains. Future studies that address this issue are warranted and should focus society's attention on the stereotype threat. In this way, real steps toward progressive change can be realized.