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Sport Fandom and Perceptions of Color

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Sport Fandom and Perceptions of Color

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Abstract

The goal of this study was to examine the relationship between color and sport fan perceptions. There is a distinct connection between colors and emotions that is underexplored in the setting of sport. This connection could also be influenced by someone's level of dysfunction or their attachment to a team. The research hoped to identify the influencing factors of the connection and offer possible applications of the research in the future such as advertisements, posters, and commercials. It was hypothesized that sport fans of varying levels of dysfunction will have different perceptions and cognitions based on the color of the advertisement associated with a game. This hypothesis was studied by surveying participants' levels of sport team identification, dysfunctional fandom, and level of sport fandom. These measures were taken in conjunction with viewing a colored game poster and answering questions about their thoughts concerning the basketball game described on the poster itself. Black and white, red, light blue, and Murray State university-colored (i.e. blue and gold) posters were randomly assigned to participants to view. Highly dysfunctional fans viewing the red poster reported that the game was likely to be aggressive in nature. Low dysfunctional fans viewing the blue poster reported that the game was likely to be aggressive in nature. By understanding this connection researchers, sport teams, and leagues could gain a greater ability to market tournaments and games, as well as having a greater understanding of the connection of color and perceptions.

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Sport Fandom and Perceptions of Color

Color preference is caused by an affective response to correspondingly colored objects (Palmer & Schloss, 2010). We experience color daily, both consciously and subconsciously, and this can impact mood given that color can evoke various emotional responses (Güneş & Olguntürk, 2020). For example, relationships between colors and objects leads to preferential differences in those objects (Palmer & Schloss, 2010). Additionally, color preference is a key component of the visual experience of humans, and can help dictate social behaviors. (Palmer & Schloss, 2010).

Color affects our perceptions and cognitions of ourselves as well as others around us, even changing our preferred color based on context (Palmer & Schloss, 2010). Specifically, research has shown that the color red is associated with anger, green with peacefulness, yellow with happiness, blue with calmness, and black with sadness (Hanada, 2018). Red is also known to be related to the perception of sexual attraction (Elliot et al., 2010). As such red is known to be tied to physiological arousal (Elliot et al., 2010). Color preference is plausibly explained by affective responses to color related objects, indicating that context contributes to schema about a color (Palmer & Schloss, 2010). Black specifically is perceived as threatening, and a color of death (Frank & Gilovich, 1988). A study by Vrij (1997) revealed that criminal offenders who were wearing black evoked more irritation than their counterparts who wore light clothing. That study also found that suspects who wore black were perceived to be guiltier than those who wore light clothing. This relationship between color, situational context, and affective states can help explain how certain colors are more arousing or threatening than others (Hanada, 2018).

Research suggests that color and emotion have a direct impact on the quality of our lives (Güneş & Olguntürk, 2020). This can be seen in a study by Frank and Gilovich (1988), where they manipulated team uniform colors. They found that teams in darker uniforms were more likely to be aggressive than teams in white uniforms. This suggests that an individual's behavior can be manipulated by the color of their clothes alone through encouraging deindividuation (Frank & Gilovich 1988). This study also observed impression formation by showing referees a football game with one defending team in two different color uniforms while the offensive team wore a red uniform in both videos. The referees were asked to discuss their impressions of the defending team. The video of the game was the exact same, other than color. The results showed that the defending team was more likely to receive penalties if they were wearing the black uniform.

Color perception and sport fandom has traditionally been focused on the color black and uniforms or clothing specifically (Frank & Gilovich, 1988; Vrij, 1997). Research has not focused on sporting event advertisement or arousing color vectors. Research indicates that more colors than black are arousing when encountered in the right context (Hanada, 2018). Additionally, sport is a social setting in which emotional states are usually pushed to the extreme, which gives context for arousing color-affect association (Toder-Alon et al., 2019).

Sport Fandom and Dysfunction

Sport fandom personal variables can be classified into three main types: sport fandom, team identification, and sport fan dysfunction. Research has shown that there is a positive relationship between team identification and fan aggression, as well as between team identification and aggressive communication (Toder-Alon et al., 2019). Sports fans are shown to have an increase in instrumental aggression towards fans of the opposing team (Wann et al.,

2017). This indicates that sport fans do not become aggressive for the sake of harming others. In addition, research has shown that while fans are more likely to commit instrumental aggressive acts, they are not likely to be high intensity (Wann et al., 2003). Gender differences were not found for non-violent forms of aggression such as rumor spreading and among sports fans the amount of identification with a team is more central to their personality than being a sport fan is (Wann et al., 2021). Between the heightened aggressive atmosphere and how team identification is central to self-perception, research has suggested that higher emotional highs and lower emotional lows can stem from sport fandom through identity mediation and social interaction (Wann & James, 2019).

Sport is a highly social experience in which stress and positive or negative emotions are prevalent, even well-after a game has ended (Schellenberg & Verner-Filion, 2021). This stress and lingering emotion can often create a hostile and charged environment where fans may use war like terminology to distinguish their team against an opponent (Wann & Goeke, 2017). In addition, sport fans can be loud and disruptive, a trait called dysfunctional fandom, which is the extent to which fans are confrontational and exceedingly loud about outcomes in a sports match that they dislike (Wakefield & Wann, 2006). Dysfunctional fandom was found to be a significant positive predictor of the perceptions of the appropriateness of verbal fan aggression at sporting events (Donahue & Wann 2009). This research suggested that dysfunctional fans are not just loud at sporting events, they use their verbosity to act as an instrument for aggressive intentions.

Dysfunctional fans have the same average levels of identification with their team as non-dysfunctional fans do (Wakefield & Wann, 2006). However, dysfunctional fans do not show unusually high levels of dislike for rivals suggesting that while they find sport aggressive, they do not see the other team as a threat (Smith & Wann, 2006). Prior studies show that

dysfunctional fans believe that sport fan aggression is acceptable (Wann & James, 2019). In fact, opposing fan aggression is more likely to be instrumental in nature for both dysfunctional and non-dysfunctional fans (Wann et al., 2017). Only dysfunctional fans are predicted to have hostile aggression, and this aggression is specifically aimed at the referees in a game (Wann et al., 2017). Knowing that dysfunctional fans do not regard the opposing team as the source of aggression, that fan aggression is acceptable and expected, and that sport teams who wear black uniforms receive an increase in penalties, suggests that color perception can influence aggressive thoughts about a sporting event (Frank & Gilovich, 1988; Smith & Wann, 2006).

The Current Study

Given the aforementioned literature, the current study aims to further our understanding of perceptions of color and sport fandom. Specifically, one hypothesis and three research questions were examined.

Hypothesis 1: It was hypothesized that sport fans with varying levels of dysfunction would have different perceptions based on the color of an advertisement associated with a hypothetical sporting event. Specifically, it was expected that fans higher in dysfunctional would perceive a game described in a red game announcement poster as more likely to be aggressive than those with lower levels of dysfunction.

Research Question 1: Will fans higher or lower in dysfunction have differential perceptions of the hypothetical sporting event with respect to game excitement, the appeal of the poster, the likelihood they would attend, and the likelihood that Murray State University would win the game?

Research Question 2: Will fans higher or lower in team identification have differential perceptions of the hypothetical sporting event with respect to the amount of aggression at the

game, game excitement, the appeal of the poster, the likelihood they would attend, and the likelihood that Murray State University would win the game?

Research Question 3: Will fans higher or lower in sport fandom have differential perceptions of the hypothetical sporting event with respect to the amount of aggression at the game, game excitement, the appeal of the poster, the likelihood they would attend, and the likelihood that Murray State University would win the game?

Method

Participants

There were 130 participants before data cleansing. A total of 55 participants were removed for not identifying as a Murray State Men's Basketball Team fan, leaving a final sample of 77 individuals. Their ages range was 18 to 28 with a mean of 19.60 and a standard deviation of 1.65. The gender distribution was 25 males (33%), 51 females (66%), and 1 other. Participants were volunteers from Dr. Wann's classes who received extra credit in exchange for participation.

Materials and Procedure

This study was approved by the Murray State University IRB prior to any participant testing (see Appendix E). The survey was given to Dr. Wann's students in person. Students received extra credit for completing the survey. Participants were given a cover letter which explained that by taking the survey they consent to participate (see Appendix A). After they read the cover letter, they were instructed to take a survey packet (see Appendix D) which contained the Sport Fan Questionnaire (SFQ; Wann, 2002), the Dysfunctional Fan Questionnaire (DFQ; Wakefield & Wann, 2006), one of four colored posters which they would review before continuing (see Appendix B), a scale containing 12 questions about the posters created for this

study, and a modified version of the Sport Spectator Identification Scale – Revised (SSIS-R; James, Delia, & Wann, 2019).

The SFQ had 5 Likert-scale style questions with response options ranging from 1 (*low fandom*) to 8 (*high fandom*). The SFQ had a Cronbach's Alpha of .95. The DFQ had 5 Likert-scale style questions with response options ranging from 1 (*low dysfunction*) to 10 (*High Dysfunction*). The DFQ had a Cronbach's Alpha of .89. The in-house scale had 12 Likert-scale style questions with response options ranging from 1 (*Low*) to 8 (*High*). It was divided into 3 subscales with 2 individual questions. The first subscale was poster aesthetic which involves questions 1 and 6 with a Cronbach's Alpha of .87. The next subscale was potential excitement which involves questions 3, 9, and 10. This subscale had a Cronbach's Alpha of .87. The final subscale was perceived aggression which involves questions 4, 5, 11, and 12. This subscale had a Cronbach's Alpha of .79. The SSIS-R had seven Likert-scale style questions with response options ranging from 1 (*A little bit of a fan*) and 8 (*Very much a fan*) and it had a Cronbach's Alpha of .92. The SSIS-R was modified to ask about identification with Murray State Men's Basketball. After the participants completed the survey, they were given a debriefing explaining the goal of the research (see Appendix C).

Results

Hypothesis 1 stated that persons with varying levels of sport fan dysfunction will have different perceptions based on the color of an advertisement associated with a sporting event. Specifically, it is expected that fans higher in dysfunctional will perceive a game described in a red game announcement poster as more likely to be aggressive than those with lower levels of dysfunction. Research Question 1 asked if persons higher or lower in dysfunction have differential perceptions of the hypothetical with respect to game excitement, the appeal of the

poster, the likelihood they would attend, and the likelihood that Murray State University would win the game. A median split was conducted on participants' fan dysfunction scores. The low dysfunction group contained participants scoring 5 to 13 (n = 38) while the high subgroup scored 14 to 46 (n = 39). The hypothesis and research question were tested via a 2 (Level of Fan Dysfunction: high or low) x 4 (Poster Color: blue, red, grey, or the blue and gold Murray State University colors) multivariate analysis of variance (MANOVA) in which the dependent variables were perceived game aggression (i.e., Hypothesis 1), game excitement, the appeal of the poster, the likelihood they would attend, and the likelihood that Murray State University would win the game. Means and standard deviations for this analysis appear in Table 1.

This analysis revealed a significant fan dysfunction main effect (Wilks' Lambda $_{1, 69}$ = 2.64, p = .03). As revealed in Table 1, higher scores on the dependent measures tended to be reported by persons higher in fan dysfunction. Univariate analyses indicated that significant differences were found for likelihood to consume, excitement, and poster appeal. This analysis failed to reveal a significant poster color main effect (Wilks' Lambda $_{3, 69}$ = 0.99, p = .47). This analysis revealed a significant fan dysfunction by poster color interaction effect (Wilks' Lambda $_{3, 69}$ = 2.05, p = .01). Univariate analyses indicated that significant interactions were found for perceived game aggression and excitement. Thus, with respect to Hypothesis 1, the hypothesis was supported as persons higher in fan dysfunction were especially likely to perceive that the game would be aggressive when viewing the red poster. This finding is depicted graphically in Figure 1. With respect to Research Question 1, the significant interaction for excitement indicates that persons higher in fan dysfunction were more likely to perceive that the game would be more exciting when viewing the red poster. This finding is depicted graphically in Figure 2.

Table 1

Means and Standard Deviations for the Dysfunction Level by Poster Color

		Low Dysfunction				High Dysfunction			
Poster Type		Blue	Red	Gray	MSU	Blue	Red	Gray	MSU
Consume Game	Mean	4.38	4.00	2.89	3.67	4.42	5.11	6.00	5.43
	SD.	2.14	1.30	1.83	2.18	1.88	1.62	1.79	1.81
MSU Will Win	Mean	5.62	4.29	4.22	5.11	5.17	4.89	5.45	4.43
	SD.	1.04	1.25	1.64	1.69	1.40	1.05	0.93	1.27
Excitement Of Game	Mean	17.77	13.57	14.78	17.78	16.25	17.67	19.73	18.00
	SD.	3.39	4.61	5.83	4.56	2.63	4.58	2.83	2.83
Aggression In Game	Mean	22.46	16.29	17.33	21.56	18.67	23.22	22.36	20.86
	SD.	3.50	6.05	3.91	5.57	3.08	3.87	4.08	5.37
Poster Appeal	Mean	11.77	9.14	9.11	10.00	10.42	12.11	10.73	12.00
	SD.	1.88	2.91	3.62	2.24	2.84	2.56	3.26	2.58

Figure 1

Median Split on the Dysfunction Scale by the Perceived Aggression Subscale

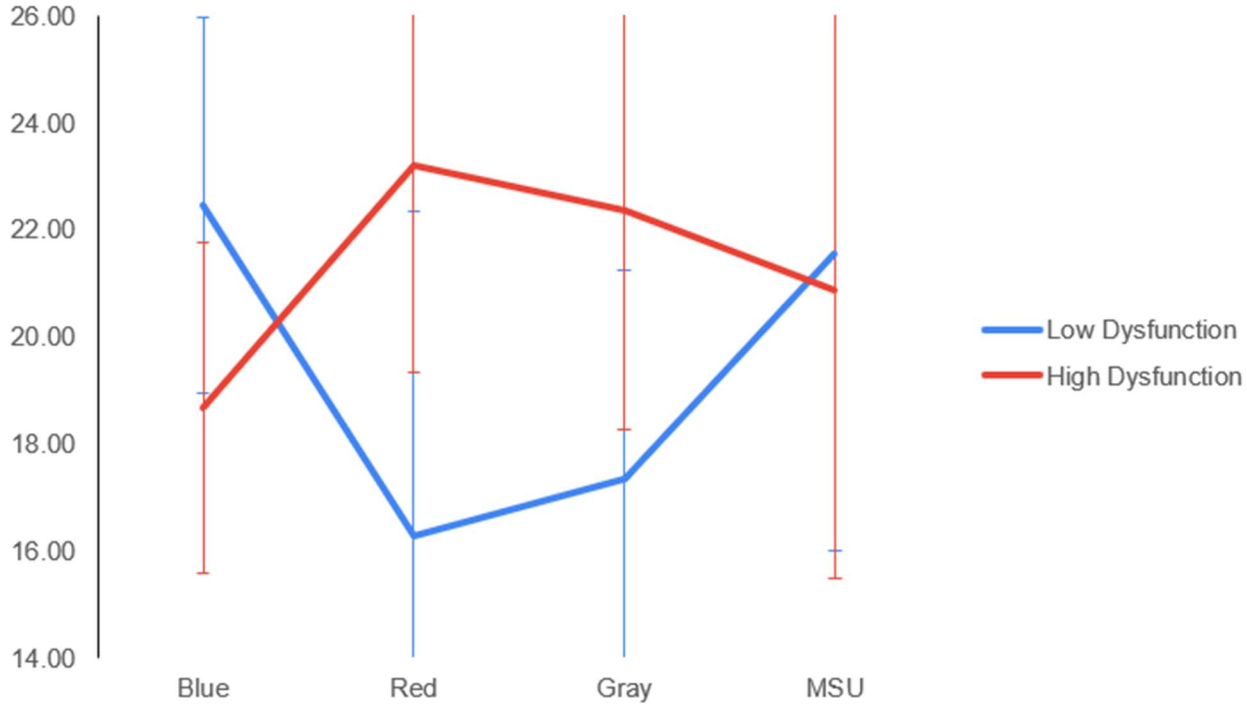
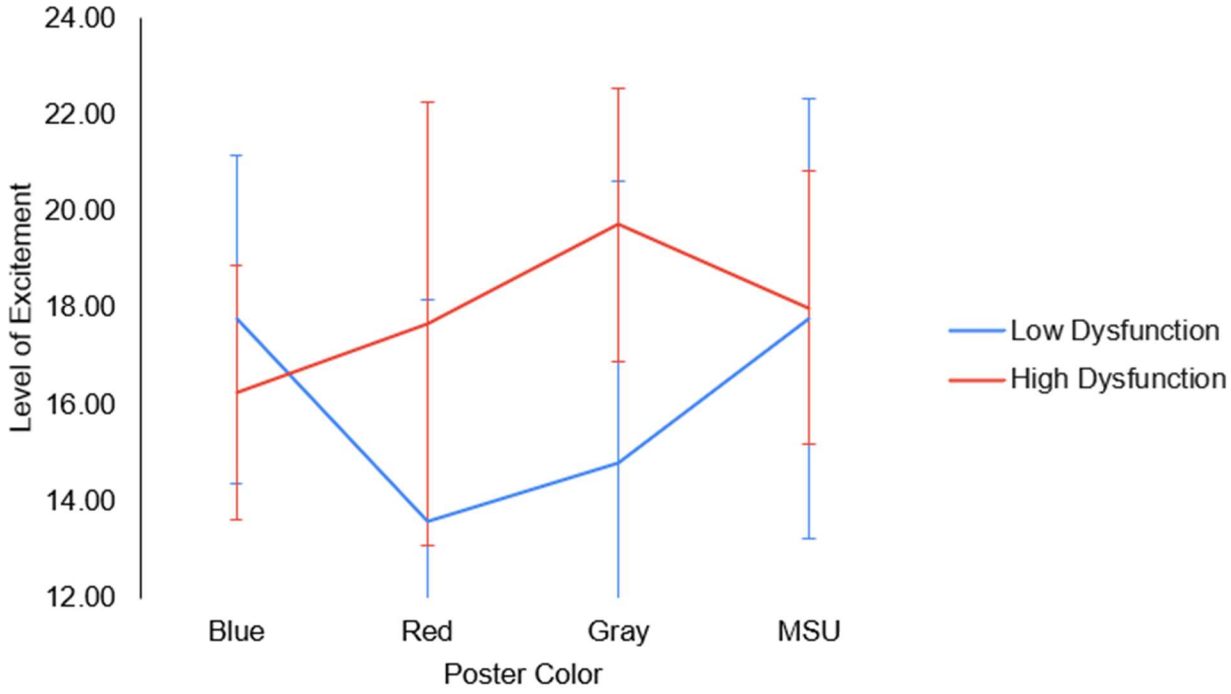


Figure 2

Median Split on the Dysfunction Scale by the Perceived Excitement Subscale



Research Question 2 examined whether or not persons of differing levels in team identification have differential perceptions of the hypothetical with respect to the amount of aggression at the game, game excitement, the appeal of the poster, the likelihood they would attend, and the likelihood that Murray State University would win the game. A median split was performed on participants' identification scores. The low group contained participants 7 to 21 (n = 38) and the high group was 22 to 43 (n = 39). The research question was tested via a 2 (Level of Team identification: high or low) x 4 (Poster Color: blue, red, grey, or the blue and gold Murray State University colors) multivariate analysis of variance (MANOVA) in which the dependent variables were perceived game aggression, game excitement, the appeal of the poster, the likely they would attend, and the likelihood that Murray State University would win the game. Means and standard deviations for this analysis appear in Table 2.

This analysis revealed a significant team identification main effect (Wilks' Lamba $_{1, 69}$ = 5.43, p = .01). As revealed in Table 2, higher scores on the dependent measures were more likely to be found by participants with higher scores in team identification. Univariate analysis revealed that significant differences were found for the likelihood to consume and the perceived excitement of the game. This analysis failed to reveal a significant poster color main effect (Wilks' Lambda $_{3, 69}$ = 0.97, p = .48). This analysis also failed to reveal a significant team identification by poster color main effect (Wilks' Lambda $_{3, 69}$ = 1.11, p = .35). Thus, with respect to Research Question 2, the lack of significant interaction indicates that team identification and poster color do not combine to have an effect on game and poster perceptions.

Table 2

Means and Standard Deviations for the Team Identification Level by Poster Color

		Low Team Identification				High Team Identification			
Poster Type		Blue	Red	Gray	MSU	Blue	Red	Gray	MSU
Consume Game	Mean	4.00	3.86	3.11	2.33	5.11	5.22	5.82	5.70
	SD.	1.90	1.35	1.97	1.21	2.03	1.48	1.49	1.49
MSU Will Win	Mean	5.31	5.00	4.11	4.83	5.56	4.33	5.55	4.80
	SD.	1.14	0.82	1.54	2.04	1.42	1.32	0.93	1.23
Excitement Of Game	Mean	16.75	17.14	14.33	15.67	17.04	15.87	17.50	17.89
	SD.	2.91	4.14	5.46	4.32	3.09	4.91	4.99	3.59
Aggression In Game	Mean	21.25	21.57	17.89	20.50	19.56	19.11	21.91	21.70
	SD.	3.38	6.85	4.76	4.55	4.39	5.28	3.91	5.91
Poster Appeal	Mean	10.75	11.43	8.67	10.33	11.78	10.33	11.09	11.20
	SD.	2.41	1.90	3.46	1.86	2.49	3.74	3.14	2.90

Research Question 3 examined whether or not persons with differing levels of sport fandom would have differential perceptions of the hypothetical with respect to the amount of aggression at the game, game excitement, the appeal of the poster, the likelihood they would attend, and the likelihood that Murray State University would win the game. A median split was performed on the participants' fandom scores. The low group contained participants scoring 5 to 12 (n = 36) and the high group contained participants scoring 13 to 40 (n = 41). The research question was tested via a 2 (Level of Sport Fandom: high or low) x 4 (Poster Color: blue, red, grey, or the blue and gold Murray State University colors) multivariate analysis of variance (MANOVA) in which the dependent variables were perceived game aggression, game excitement, the appeal of the poster, the likely they would attend, and the likelihood that Murray State University would win the game. Means and standard deviations for this analysis appear in Table 3.

This analysis revealed a significant fandom main effect (Wilks' Lambda $_{1, 69}$ = 5.90, p = .01). As revealed in Table 3, higher scores on the dependent measures were more likely to be found by participants with higher scores in sport fandom. Univariate analysis revealed that significant differences were found with respect to the likelihood to consume, perceived game excitement, perceived game aggression, and the poster's appeal. This analysis failed to reveal a significant poster color main effect (Wilks' Lambda $_{3, 69}$ = 0.94, p = .52). This analysis also failed to reveal a significant fan identification by poster color main effect (Wilks' Lambda $_{3, 69}$ = 1.28, p = .216). Thus, with respect to Research Question 3, the lack of significant interaction indicates that sport fandom and poster color do not combine to have an effect on game and poster perceptions.

Table 3

Means and Standard Deviations for the Fandom Level by Poster Color

		Low Fandom				High Fandom			
Poster Type		Blue	Red	Gray	MSU	Blue	Red	Gray	MSU
Consume Game	Mean	4.07	3.43	2.71	3.14	4.90	5.56	5.62	5.44
	SD.	2.15	1.13	2.06	2.19	1.66	1.13	1.90	1.59
MSU Will Win	Mean	5.67	4.14	3.86	5.14	5.00	5.00	5.46	4.56
	SD.	1.05	1.35	1.68	1.95	1.41	0.87	0.88	1.13
Excitement Of Game	Mean	17.20	13.00	13.29	16.14	16.80	18.11	19.77	19.22
	SD.	3.30	5.20	5.79	4.14	2.90	3.48	2.59	2.59
Aggression In Game	Mean	21.40	17.86	16.57	20.00	19.50	22.00	22.00	22.22
	SD.	3.18	6.74	4.12	4.36	4.45	4.85	3.85	6.02
Poster Appeal	Mean	11.00	9.14	8.29	10.71	11.30	12.11	10.92	11.00
	SD.	2.56	2.91	3.73	1.97	2.36	2.57	3.01	3.00

Discussion

Hypothesis 1 stated that sport fans with varying levels of dysfunction would have different perceptions of a target game based on the color of an advertisement associated with a sporting event. Specifically, it was expected that fans higher in dysfunctional would perceive a game described in a red game announcement poster as more likely to be aggressive than those with lower levels of dysfunction. As shown in Figure 1, dysfunctional fans did indeed report increased perceived aggression when they observed the red poster and lower aggression when they observed the blue poster. The surprising find was that low dysfunction fans found blue to be highly aggressive and red to be less aggressive. According to previous research, team identification and fandom are correlated with an increase in aggression which suggests that regardless of the level of dysfunction (Wann et al., 2017). This line of thought points to a general trend that fans should follow regarding perceived aggression of colors in sport of more arousing colors such as red or black being more aggressive (Frank & Gilovich 1988; Hanada, 2018). The data suggests that the level of dysfunction mediates perception of color and the contextual interpretation surrounding events about the team in question.

The results of this study replicate and build upon previous research on color, suggesting that red evokes an aggressive response specifically to fans who already see sport as a hostile environment (Hanada, 2018). Additionally, sport fans are more willing to accept aggression, but dysfunctional fans specifically are more likely to use war terminology and see sport as oppositional (Wakefield & Wann, 2006; Wann & Goeke, 2017). Even though dysfunctional fans do not see the opposition as the source of aggression they have an increase in aggressive thoughts (Smith & Wann, 2006). Thus, as past research and this study suggest, a group of people

who are more willing to accept instrumental violence against their opposition in an aggressive setting should be primed to see the match as more aggressive (Wann et al., 2017).

Research Question 1 asked if fans higher or lower in dysfunction would have differential perceptions of the hypothetical game with respect to game excitement, the appeal of the poster, the likelihood they would attend, and the likelihood that Murray State University would win the game. As shown in Figure 2, dysfunctional fans showed an increase in perceived excitement when they observed the red poster compared to the lower dysfunctional fans who found the blue poster to be more exciting. This matches the findings of Hypothesis 1, suggesting that dysfunctional fans, who are more likely to be emotional, are more inclined to see red as threatening and arousing (Wann & James, 2019). In fact, these two findings are so similar that there is almost a mirror image between the aggressive subscale and the excitement subscale when graphed (see Figures 1 and 2). This presents the idea that dysfunctional fans are more likely to see an aggressive game as more exciting. We know that dysfunctional fans are more likely to accept verbal aggression towards the opposing team and harbor hostility towards referees suggesting aggression is a natural perception in sport (Wann et al., 2017). So, to dysfunctional fans, the event of sport is perceived as being inherently aggressive and by extension inherently exciting.

An interesting note is that Figures 1 and 2 show the MSU related scores as being relatively homogenous. This means there was no difference among high and low dysfunctional fans with regards to MSU colored posters about excitement or aggression. One explanation for this could be the amount of exposure to Murray State colors, specifically Gold and Navy Blue, has caused desensitization. Desensitization theory suggests that emotional and behavioral responses to a stimuli will be lessened with extended exposure to that stimuli (Chen et al., 2020).

This theory would suggest that fans are less likely to react to their own team's colors and helps explain the similarity between the scores of the MSU poster groups.

Research Question 2 examined whether or not fans of differing levels in team identification would have differential perceptions of the hypothetical contest with respect to the amount of aggression at the game, game excitement, the appeal of the poster, the likelihood they would attend, and the likelihood that Murray State University would win the game. The data showed a main effect of team identification with regards to the likelihood of consuming and the perceived excitement about the game. There was no interaction effect found between team identification and poster color. This means that regardless of poster color fans who were higher in team identification were more likely to see themselves going to and enjoying this basketball game. This is expected as fans who are highly identified with a team are more likely to support and invest time into that team (Wann & James 2019).

Research Question 3 examined whether or not fans with differing levels of sport fandom would have differential perceptions of the hypothetical game with respect to the amount of aggression at the game, game excitement, the appeal of the poster, the likelihood they would attend, and the likelihood that Murray State University would win the game. Similar to the analyses involving team identification, the data revealed a main effect of sport fandom with regards to the likelihood to consume, perceived game excitement, perceived game aggression, and how appealing the posters were. However, the data did not find a significant interaction between sport fandom and poster color. This means that participants who identified as higher in sport fandom were more likely to see themselves going to the game, enjoying the game, see the game as aggressive, and enjoying the poster itself regardless of the color. This is expected as

someone who is higher in sport fandom will be more likely to consume sport related media (Wann & James, 2019).

There are several limitations with the study that should be acknowledged. First, the lack of a diverse subject pool is a primary limitation. This sample was two-thirds female, almost all of whom were 19 years of age, and the sample size is almost half of the total participants before cleaning. A large number of surveys were removed because they did not identify with Murray State Basketball even a little bit. This limitation could be addressed by recruiting participants before, during, and after a Murray State Men's Basketball game. It could also be addressed by recruiting participants from the people who buy tickets to the Murray State Men's Basketball Games. Although the study is not without limitations, the data related to Hypothesis 1 and Research Question 1 present an interesting concept. Dysfunctional fandom is an important part of the context surrounding the color perception in sport advertisements. However, the data from Research Questions 2 and 3 show that while dysfunction influences perception, people who identify as sport fans and who identify with the team will find sport advertisements as exciting, appealing, and aggressive regardless of the color of the advertisement. This study suggests that color is not a primary method of engagement for sport fans, so using a gray scale advertisement may be the most effective method of priming future game attendees towards excitement and aggression.

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Appendix A

Cover Letter

Study Title: Sport fandom and perceptions of color

Principal Investigators: Alex A. Imm; Daniel L. Wann, PhD;

Department of Psychology, 201 Wells Hall, 270-809-2860.

You are being asked to participate in a survey research project. As such, we would like you to have an understanding of the following:

1. Your participation is strictly voluntary and you may discontinue your participation at any time.
2. All of your responses will remain confidential.
3. The purpose of this study is to gain a better understanding of sport fandom and perceptions of color. Thus, you will be asked to answer a series of questions about your interest in sport, sport teams, and perceptions of sport-related advertisements.
4. Although your individual responses will not be made public (i.e., they will remain anonymous), your data may be combined with the data of others and submitted for presentation at conventions and/or publication in scholarly journals.
5. You must be 18 years or older to participate.
6. Your completion of items indicates your consent to participate.
7. There are no direct benefits to you for your participation in this research. A general benefit will be that you will receive first hand experience of psychological research and you will add to our knowledge of the research subject.
8. There are no known risks involved with this research.
9. Completion of this study will require approximately 10 minutes.

Your continued participation indicates that this study has been explained to you, that your questions have been answered, and that you agree to take part in this study.

THIS PROJECT HAS BEEN REVIEWED AND APPROVED BY THE MURRAY STATE UNIVERSITY INSTITUTIONAL REVIEW BOARD (IRB) FOR THE PROTECTION OF HUMAN SUBJECTS. ANY QUESTIONS PERTAINING TO YOUR RIGHTS AS A PARTICIPANT, OR ACTIVITY-RELATED INJURY SHOULD BE BROUGHT TO THE ATTENTION OF THE IRB ADMINISTRATOR AT (270) 809-2916. ANY

QUESTIONS ABOUT THE CONDUCT OF THIS RESEARCH PROJECT SHOULD BE BROUGHT TO THE ATTENTION OF DANIEL L. WANN, Ph.D., IN THE PSYCHOLOGY DEPT., AT (270) 809-2860.

Appendix B

Posters

[Red]

[Blue]


OVC Basketball
Game
VS
Belmont
University
Murray State
University

[Black and White]

[Murray State University Colors]

Appendix C

Debriefing Statement

We would like to thank you for your participation in this research. The purpose of this study is to gain a better understanding of sport fandom and perceptions of color. Specifically, we are investigating if the colors of sport advertisements impact fans' perceptions about the aggression of that event. If you would like a final copy of the research findings, please contact, after December 31, 2024, Daniel L. Wann, Ph.D. at (270) 809-2860 or at the Dept. of Psychology, Murray State University, Murray, KY 42071.

Appendix D

Survey

Instructions: Please answer each of the following demographic questions, being completely honest in your responses.

[Demographics]

1. Age _____ 2. Gender (circle one) MALE FEMALE OTHER RATHER NOT SPECIFY

[Sport Fan Questionnaire]

Please answer each of the following sport fan questions being completely honest in your responses. There are no "right" or "wrong" answers -- we simply want you to indicate the most accurate response by writing the appropriate answer in the space next to each item.

STRONGLY DISAGREE 1 2 3 4 5 6 7 8 STORNGLY AGREE

_____1. I consider myself to be a sport fan.

_____2. My friends see me as a sport fan.

_____3. I believe that following sport is the most enjoyable form of entertainment.

_____4. My life would be less enjoyable if I were not able to follow sports.

_____5. Being a sport fan is very important to me.

[Sport Fan Dysfunction]

Please answer each of the following questions being completely honest in your responses. There are no "right" or "wrong" answers--we simply want you to indicate the most accurate response by writing the appropriate answer in the space next to each item. Please report the extent to which each statement is an accurate description of your involvement as a sport fan.

Inaccurate as a description of me

Accurate as a description of me

1 2 3 4 5 6 7 8 9 10

____1. I can't help but complain when there is something wrong related to the teams I support.

____2. When a coach or player makes mistakes, I let others know about it.

____3. I speak my mind when I see coaches or players screwing up.

____4. I am one of those that stand up and yell even when others don't like it.

____5. I have had confrontations with others at sporting events when I voiced my opinion.

Instructions: Please take a few moments to read and thoroughly examine the sample sporting event advertisement poster that appears on the next page. After you have examined it for a few moments, please complete the questions on the remaining pages.

[Next Page]

[Game Advertisement]

[Next Page]

Instructions. Please answer the following items about your thoughts on the game advertisement poster you just examined. (circle your responses to each item)

1. How attractive did you find the advertisement?

Not at all attractive 1 2 3 4 5 6 7 8 Very attractive

2. How close would you expect the final score to be for this basketball game?

Not at all close 1 2 3 4 5 6 7 8 Very close

3. How exciting would you expect this basketball game to be?

Not at all exciting 1 2 3 4 5 6 7 8 Very exciting

4. How much "dirty play" would you expect to find in this basketball game?

Not much dirty play 1 2 3 4 5 6 7 8 A great deal of dirty play

5. How many fouls would you expect to be called in this basketball game?

Very few fouls 1 2 3 4 5 6 7 8 A great number of fouls

6. How appealing did you find the advertisement?

Not at all appealing 1 2 3 4 5 6 7 8 Very appealing

7. How likely would you be to attend this basketball game?

Not at all likely 1 2 3 4 5 6 7 8 Very likely

8. Based on the advertisement you just viewed, how likely is it that Murray State University would win the basketball game?

Not at all likely 1 2 3 4 5 6 7 8 Very likely

9. How competitive would you expect this basketball game to be?

Not at all competitive 1 2 3 4 5 6 7 8 Very competitive

10. How entertaining would you expect this basketball game to be?

Not at all entertaining 1 2 3 4 5 6 7 8 Very entertaining

11. How loud would you expect the fans to be at this basketball game?

Not at all loud 1 2 3 4 5 6 7 8 Very loud

12. How aggressive would you expect the fans to be at this basketball game?

Not at all aggressive 1 2 3 4 5 6 7 8 Very aggressive

Are you a fan of the Murray State University men's basketball team, even if just a little bit? (please circle your answer)

NO YES

If you answered YES to the item above, please continue to answer the remaining seven items about Murray State Men's basketball. If you answered NO, please skip the remaining items.

1. How important to you is it that the Murray State University men's basketball team wins?

   A Little Important 1 2 3 4 5 6 7 8 Very Important

2. How strongly do you see yourself as a fan of the Murray State University men's basketball team?

   Slightly a Fan 1 2 3 4 5 6 7 8 Very Much a Fan

3. How strongly do your friends see you as a fan of the Murray State University men's basketball team?

   Slightly a Fan 1 2 3 4 5 6 7 8 Very Much a Fan

4. During the season, how closely do you follow the Murray State University men's basketball team via any of the following: in person or on television, on the radio, on television news or a newspaper, or the Internet?

   A Little 1 2 3 4 5 6 7 8 Very Frequently

5. How important is being a fan of the Murray State University men's basketball team to you?

   A Little Important 1 2 3 4 5 6 7 8 Very Important

6. How much do you dislike the Murray State University men's basketball team's greatest rivals?

   Dislike a Little 1 2 3 4 5 6 7 8 Dislike Very Much

7. How often do you display the Murray State University men's basketball team's name or insignia at your place of work, where you live, or on your clothing?

   Occasionally 1 2 3 4 5 6 7 8 Always

Appendix E

IRB Approval

MURRAY STATE UNIVERSITY

Institutional Review Board

328 Wells Hall
Murray, KY 42071-3318
270-809-2916 • msu.irb@murraystate.edu

TO: Dan Wann, College of Humanities and Fine Arts Reigh Kemp,

FROM: IRB Coordinator and Gary ZeRuth

DATE: IRB Member 10/24/2023

RE: Human Subjects Protocol I.D. – IRB # 24-085

The IRB has completed its review of your student's Exempt protocol entitled *Sport Fandom and Perceptions of Color*. After review and consideration, the IRB has determined that the research, as described in the protocol form, will be conducted in compliance with Murray State University guidelines for the protection of human participants.

The forms and materials that have been approved for use in this research study are attached to the email containing this letter. These are the forms and materials that must be presented to the subjects. Use of any process or forms other than those approved by the IRB will be considered misconduct in research as stated in the MSU IRB Procedures and Guidelines section 20..3.

Your stated data collection period is from 10/24/2023 to 10/24/2024.

If data collection extends beyond this period, please submit an Amendment to an Approved Protocol form detailing the new data collection period and the reason for the change.
This Exempt from Further Review approval is valid until 10/23/2024.

If data collection and analysis extends beyond this date, the research project must be reviewed as a continuation project by the IRB prior to the end of the approval period, 10/23/2023. You must reapply for IRB approval by submitting a Project Update and Closure form (available at murraystate.edu/irb). You must allow ample time for IRB processing and decision prior to your expiration date, or your research must stop until such time that IRB approval is received. If the research project is completed by the end of the approval period, then a Project Update and Closure form must be submitted for IRB review so that your protocol may be closed. It is your responsibility to submit the appropriate paperwork in a

timely manner. The protocol is approved. You may begin data collection now.