



ARTICLE

Sex Matters

The Impact of Skin Tone on Perceived Levels of Attraction

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Abstract

Research finds that individuals of dark complexions are more likely to face prejudice or be discriminated against in a variety of contexts. Referred to as colorism, skin-tone-based discrimination has major implications for various life outcomes. Research on social interactions suggests that lighter skin tones are associated with a higher level of physical attractiveness, which is of particular interest for this study. This study uses quantitative survey data collected from undergraduate and graduate students from across the United States to explore the relationship between colorism, gender, and perceived physical attraction via a modified version of Harvey, Tennial, and Bank's In-Group Colorism Scale (ICS). Analyses measured the relationship between a participant's own skin tone, which was self-assessed via comparison to images modeled after make-up swatches, and results on a subscale of the ICS which measures attraction to lighter skin tones. Our results suggest that gender has a significant impact on perceived physical attractiveness, with male-identifying participants placing more weight on the significance of skin tone when determining physical attraction. Implications for future research and translational implications are also discussed.

Keywords: Colorism; Gender; Attraction; Skin tone; Race; Beauty

Introduction

Although the commonly recited quote “beauty is in the eye of the beholder” suggests that finding someone physically attractive is driven by individual preferences, scholarship finds commonalities in the features people find attractive, between and within cultures (Langlois et al., 1994; Langlois et al., 2000; Little et al., 2011). In general, it is found that facial averageness and facial symmetry are important in consideration of attractiveness (Alley and Cunningham, 1991; Kościński 2007; Muñoz-Reyes et al., 2015; Perrett et al., 1999). However, traits that are considered attractive also vary by sex. That is, men and women find different characteristics attractive (Keating 1985). Research on overall physical attractiveness has largely focused on considering the way heterosexual males view females, which may be influenced by the evolutionary psychology perspective of socialization of sex role stereotypes (Frederick and Haselton, 2007). This perspective emphasizes the socialization of a female's role to be driven by sexuality and fertility and the socialization of a male's role to be driven by material earning potential (Buss and Schmitt, 2019; Franzoi and Herzog, 1987; Pawlowski and Dunbar, 1999), thus overemphasizing the importance of physical attractiveness as a female trait. For example, heterosexual males tend to place more

importance on sexually-related body parts in females (Franzoi and Herzog, 1987), and find nondominant facial cues (e.g., larger eyes, less eyebrow hair, rounder faces) more attractive (Keating 1985). There is, however, a large body of research which considers heterosexual females' views of men's faces (Little et al., 2011). This literature shows, in contrast, that heterosexual women tend to place more importance on strength and physical fitness in men (Franzoi and Herzog, 1987; Frederick and Haselton, 2007), and find dominant facial cues (e.g., smaller eyes, stronger eyebrows, prominent jaws) more attractive (Keating 1985). Notably, however, these findings are not as clear or consistent as those which focus on heterosexual males (Little et al., 2011).

Across sexes, skin tone is another physical characteristic that shapes perceptions of attraction. Critical to our understanding of skin tone is the concept of colorism. The term colorism was coined by Alice Walker (1983) and defined by her as “prejudicial or preferential treatment of same-race people based solely on their color” (p. 290). Applying the definition of colorism to human attraction, it is expected that lighter skin tones are perceived to be more attractive than darker skin tones. The preference of lighter skin aligns with the idealization of Whiteness in society (Hall 2018; Hunter 2002; Jha 2015). The pervasiveness of this colorist preference is evident in media depictions of beauty; previous research has illustrated colorism within fashion modeling as magazines and advertisements favor photos of models with lighter skin tones and eurocentric features (Leslie 1995; Keenan 1996).

In an effort to visualize this finding using magazines from recent years, we completed a rudimentary exploration of ten popular fashion magazines from 2019.¹ We utilized a publicly available Hue, Saturation, and Lightness (HSL) color picker online (2023) to assess the lightness value of every model's skin tone on each cover of these ten magazines for the whole year. In total, 123 models were on the covers of these magazines in 2019; one cover was removed from the sample as the photo was grayscale. We chose to use the color picker on each model's forehead, as much between the eyebrows as possible. While a rough measurement, this was a consistent area between models that was less affected by any glare, shine, or shadow from the photo compared to other parts of the face. It is important to note that factors such as lighting, closeness of photo, angle of model's head, and editing may have an impact on the lightness of a model's skin. However, as a quick, visual assessment, these results are still important and warrant further research. Figure 1 presents a visual overview of these results. Lightness values from HSL range from 0-100, but our sample has a range of 22-93. These values were combined into ranges to allow for easier visualization, and colors which make up the bar graph are exact HSL values for a model within the respective lightness range (Figure 1). If we divide the range of sample of lightness values into three equal categories to represent dark, medium, and light skin tones, about 8.9% of models can be categorized as having a dark skin tone, 39% of models as having a medium skin tone, and 52% of models as having a light skin tone. Further, if we remove *Essence* from the analysis—the only magazine in this analysis that was created specifically for Black women—these percentages become 5.6%, 43.9%, and 65.4%, respectively. While only a simplistic, visual assessment that must be confirmed with future research, it was observed that the socially important trend of preferring models with lighter skin tones continues in the modern fashion industry. Our review of recent magazines shows a preference for lighter skin persists, making colorism research—including this study—timely and relevant.

The current study examines the relationship between human attraction, sex, and skin tone. Using original survey data from a larger study on the impact of skin tone on individual perceptions of justice, we contribute to sparse scholarship that connects colorism and sex to perceptions of attraction. We begin with a literature review of relevant topics such as colorism, gendered colorism, and attraction. We then present empirical findings and conclude with a discussion of the implications of this study.

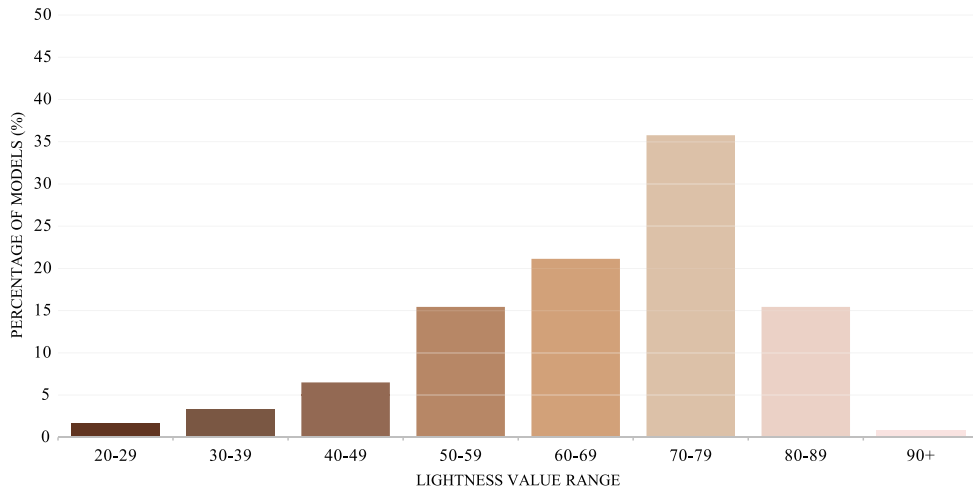


Figure 1. Percentage of Models from Popular Fashion Magazines in HSL Lightness Value Ranges (n = 123) Bar graph depicting the percentage of models on the cover of popular fashion magazines from 2019 within each lightness value range calculated from Hue, Saturation, and Lightness (HSL) values of the images. In the online version of this article, the color of each bar is an HSL tone from within the corresponding lightness value range.

Literature Review

The empirical investigation of physical attraction is more than a scientific exploration of the superficial. Perceived levels of attraction have significant implications on life outcomes. Specifically, perceptions of attractiveness are associated with better social connectedness, more positive judgment from other individuals, and overall life satisfaction (Langlois et al., 2000; Plaut et al., 2009; Umberson and Hughes, 1987). Considering the established prejudicial and discriminatory treatment that individuals of darker complexion face, this research further contributes to our understanding of the relationship between sex, skin tone, and attraction. In the next section, we provide an overview of colorism literature generally, before describing the theoretical framework of gendered colorism which we rely on to explore the established relationship between sex and skin tone. We then discuss empirical literature that examines the relationship between human attraction and other demographic factors, such as race, age, income, and relationship status. After reviewing this literature, we discuss Harvey's In-Group Colorism Scale (Harvey et al., 2017), specifically his Attraction Subscale, as an appropriate instrument to determine perceived levels of physical desirability.

Colorism

Research has found that colorism occurs across racial and ethnic groups globally (Chen and Francis-Tan, 2022; Dixon and Telles, 2017), with studies focusing on populations in areas such as Mozambique (Vera Cruz 2012), South Africa (Davids et al., 2016), India (Kukreja 2021, and Latin America (Fattore et al., 2020; Dixon 2019), among others. However, this study specifically examines a multiracial sample of American students; thus, it is imperative to understand the unique impact of colorism on the major racial and ethnic groups in the United States.

Most colorism research in the United States focuses on the experiences of Black Americans. Evidence suggests skin tone stratification among Black Americans began

during antebellum slavery, with preferential treatment given to lighter-skinned enslaved people (Bodenhorn and Ruebeck, 2007; Dixon and Telles, 2017; Reece 2019). Exclusionary practices such as “paper bag” tests continued throughout the twentieth century (Dixon and Telles, 2017; Gasman and Abiola, 2016). The paper bag test involved comparing the skin tone of Black Americans to a paper bag to determine if they were able to have access to certain privileges in society (Dixon and Telles, 2017; Gasman and Abiola, 2016). Recent research finds colorism has major implications for Black Americans beyond these exclusionary practices—especially regarding educational achievement (Ryabov 2013), earning wages (Goldsmith et al., 2007), mental and physical health (Monk 2015, 2021), and criminal justice system experiences (Monk 2019).

While less literature in the United States has focused on other minoritized² groups, similar findings have been reported among Latinx, Asian, and mixed-race communities in the United States. Among Latinx populations in the U.S., lighter skin tones have been associated with better occupational and earning outcomes (Espino and Franz, 2002; Hersch 2011), more positive self-perceptions and higher self-esteem (Telzer and Garcia, 2009), and better health outcomes (Borrell et al., 2007). Skin tone hierarchies exist in Latinx populations, with clear preference for whiter skin tones (Chavez-Dueñas et al., 2014). This has implications socially for opinions on marriage and lightening the skin of future generations, beauty standards, and negative views of darker-skinned individuals (Chavez-Dueñas et al., 2014).

For Asian populations, accounts of colorism historically indicate a preference for lighter skin especially in the context of aristocratic groups as well as experiences with European colonialism (Ryabov 2016; Thompson and McDonald, 2016). Lighter skin tones among Asian American populations have been similarly associated with higher educational attainment (Ryabov 2016), higher income (Kiang and Takeuchi, 2009), and better physical health (Kiang and Takeuchi, 2009). Preference for light skin has similar societal implications for Asian American communities, such as causing preferential treatment within families and communities (Rondilla and Spickard, 2007).

Finally, research indicates that colorism impacts mixed-race or multiracial individuals as well, but this experience is unique and dependent on culture and the way an individual identifies (Dixon and Telles, 2017; Harris 2018; Ozaki and Parson, 2016).

Gendered Colorism

Gendered colorism refers to the differential impact of skin tone on Black women and girls in comparison to Black men and boys (Abrams et al., 2020; Collins 2004; Hill 2002; Hunter 2007). While much of the original research on this phenomenon focused on the United States, gendered colorism exists globally, with research showing a disparate impact of skin tone perceptions on women internationally (see Ellis and Destine, 2023 for a review), and specifically in areas such as Latin America (Fattore et al., 2020) and India (Kukreja 2021).

Although African American skin tones range significantly, regardless of sex, females are differently impacted by their complexion compared to their male counterparts. Specifically, the sociocultural focus on lighter skin as a symbol of attractiveness impacts women more than men. While across genders lighter skin is seen as more attractive, this is seen as more important when individuals rate the attractiveness of women compared to when individuals rate the attractiveness of men (Hill 2002). In our heteronormative society, this often translates to primarily impacting whether men perceive women as attractive. Trinity Alexander and Michele M. Carter (2022) for example, found that men were significantly more likely to always prefer lighter skin tones over darker ones, while this was not the case for women.

Beyond attraction, colorism has other implications for life outcomes for women including intellect, education, and income (Hunter 2002, 2016). In 1972, Karen Dion and colleagues put forward the now classic “what is beautiful is good” stereotype, which indicates that physical attractiveness is socially desirable. Margaret Hunter (2016) extended this “halo effect” to skin tone, finding that lighter skinned students were not only perceived to be more physically attractive but also more intelligent and capable of reaching higher expectations broadly compared to darker skinned students. This effect has also been found to be correlated to outcomes related to education, income, and other markers of socio-economic status, particularly for African American and Mexican women—a distinctly gendered effect (Hunter 2002; Ryabov 2019). The perceived benefits of being lighter skinned are so embedded in communities that some individuals engage in skin bleaching to assimilate to the ideal standards of American culture and beauty perceptions (Hall 1995). Stated succinctly, colorism scholarship supports the finding that “Beauty and the consequences of skin tone are gendered” (Dixon and Telles, 2017, p. 412).

Studies have found that women identify as being more dissatisfied with their skin tone than men (Harper and Choma, 2019; Swami et al., 2013), and that there are important behavioral implications of skin tone dissatisfaction among women that occur across racial boundaries (Harper and Choma, 2019). For example, the growing industry of skin lightening products is expected to be worth \$31.2 billion by 2024 (Strategy R 2022), and one study in India found use of these products is two times more likely for women than men (Shroff et al., 2018). The success of this industry has been tied to the globalization of White supremacy and light skin, as well as the financial profits that exist from advertising the beauty of Whiteness, especially among women (Dixon and Telles, 2017). Skin lightening is a global phenomenon, though the largest number of studies come from Africa (Davids et al., 2016).

It is also important to acknowledge the prevalence of tanning among Western populations, specifically among White female individuals, as it seems to conflict with the global skin lightening culture (Dixon and Telles, 2017). While the specific reasons for tanning among White populations is outside the scope of our study, tanning has been seen as a benefit or status symbol for White individuals (Dixon and Telles, 2017) and highlights the contrast of skin tone dissatisfaction across cultures. Importantly, White women do not experience the same discrimination or negative life outcomes for not being tan, thus motivations for purposefully changing their skin tone are different. However, the primary motivations of skin tone dissatisfaction based upon an ideal standard of beauty is present across cultures. In sum, colorism has implications that can be physically (e.g., bleaching and tanning) and mentally (e.g., self-esteem) harmful (Benn et al., 2016) and these disproportionately affect women globally.

Demographic Influences on Attraction

Race

Generally, as discussed by Wendy D. Roth (2016), there are several dimensions of race, including how others observe one’s race and how one classifies themselves. In this way, skin tone can be an important observed factor in categorizing others by race (Feliciano 2016). However, skin tone and race are related but distinct concepts (Hunter 2002). Hunter (2002) argues that, while colorism is often rooted in historical racism, we see different experiences of prejudice between and across racial groups due to skin color. Within attraction, while a substantial amount of research regarding race and perceptions of attraction discusses skin tone, there is also empirical evidence that race—independent of skin tone—shapes perceptions of attraction (Keenen 1996; Mayo et al., 2006; Wilkins et al.,

2011). For example, research has found gendered racial stereotyping is a potential explanation for perceptions of attraction (Wilkins et al., 2011). Clara Wilkins and colleagues (2011) found that Asian men are stereotyped as being less masculine than other racial groups, and Asian men with higher phenotypic prototypicality, or features more closely resembling a typical person of that ethnicity, were found to be less masculine and less attractive than Asian men with lower phenotypic prototypicality. That is, as Asian men had more traditional ethnic traits, the participants in this study considered the faces to be both less masculine and less attractive.

Further, research generally finds that more Eurocentric facial features (as opposed to Afrocentric facial features) are considered more attractive, separate from, and in conjunction with, skin tone (Keenen 1996; Mayo et al., 2006). However, findings related to race, sex, and attraction can be even more complex. Researchers have reported differences among genders in determining which faces were most attractive between racial groups, with Black male faces being seen as more attractive than White or Asian male faces, but White and Asian female faces being seen as more attractive than Black female faces (Lewis 2011, 2012). Michael B. Lewis (2011) found that Black male faces were rated higher in measures of strength, dominance, and masculinity, which may account for higher attractiveness ratings among Black males. Similarly, Lewis (2011) found that Black female faces were also rated higher in measures of strength and masculinity than White female faces, which may similarly account for a lower attractiveness rating among Black females in his sample due to the aforementioned evolutionary psychology perspective which describes ideal physical features between sexes (Frederick and Haselton, 2007). Additionally, some researchers have found there to be a preference for mixed-race faces (Lewis 2010; Stepanova and Strube, 2018), even within studies conducted cross-culturally (Little et al., 2012; Rhodes et al., 2005). Robert L. Reece (2016) found that even controlling for variables such as skin tone, hair color, and eye color, mixed-race individuals were rated higher on attractiveness. Importantly, Lewis (2011) found a distinctly gendered effect, where mixed-race faces were rated significantly more attractive for female faces but not for male faces. These results further emphasize a distinction between race and skin tone.

Although some may argue that racialized attraction is simply a matter of personal preference, Denton Callander and colleagues (2015) found that attitudes toward sexual racism—racial discrimination in the context of a sexual or romantic partnership—were related to generic racist attitudes. Thus, race has an impact on individual perceptions of attraction, though these impacts are inconsistent and are related to generic racist attitudes.

Age

Literature exploring the relationship between age and attraction finds similar results overall, in that life experience can influence perceptions of the attractiveness of others. As we develop, our peers and colleagues develop alongside us, which can influence our perceptions of attractiveness (Saxton et al., 2009). Philip A. Cooper and colleagues (2006) found that young children, adolescents, and adults all perceived different types or locations of facial features as attractive. Thus, perceptions of attractiveness change partly because one's height and viewpoint of faces change (Cooper et al., 2006; Geldart 2008). These changes are found even through a narrower age range of adolescence, specifically in association with pubertal development (Saxton et al., 2009). Age and life stage thus have an impact on individual perceptions of attraction, with preferences that may change over time.

Income

Additionally, income is a determinant of attraction, primarily in a gendered context. Studies find that there is evidence to support that, specifically for females, income can have a large impact on perceptions of attractiveness (Ong and Wang, 2015; Wang et al., 2018). Alongside collaborators, Guanlin Wang (2018) found that attractiveness ratings of an individual's image plus annual salary were 1000 times more sensitive to income for females than males. David Ong and Jue Wang (2015) also found that salary was more important for all women, but a woman's own income level affected this preference. There was an increase in higher rates of visits to male online dating profiles with higher incomes as a woman's own income increased (Ong and Wang, 2015). Generally, researchers have also found that marriages were less likely in the United States when a woman has a higher potential earning than the man (Bertrand et al., 2013). One's own income, as well as the income of the other, are important factors in individual perceptions of attraction, and this effect is significantly gendered.

Relationship Status

An important aspect of the conversation about attraction is relationship goals and current relationship status. Colorism research has focused on relationship status, finding that among young Black women (ages sixteen to twenty-nine), light-skinned females were significantly more likely to be married currently or in the past than their medium- or dark-skinned counterparts (Hamilton et al., 2009). However, research on Black individuals of all ages has shown no significant differences between skin tone and marital status (Monk 2014), although Black females of all ages were significantly less likely to have ever been married than White women (Hamilton et al., 2009). Further, Ellis P. Monk (2014) found significant evidence of skin-tone-based homogamy, where lighter-skinned Black individuals were more likely to be married to other lighter-skinned Black individuals. While these results are important surrounding the conversation of gendered colorism and attraction for relationships, this study is focused on attraction outside of the context of commitment or long-term relationships.

In recent years, research has shown that "hooking up," or having casual sexual encounters, is more common than it was previously (Monto and Carey, 2014), with the majority of young adults today reporting a "casual" sexual experience (Garcia et al., 2012). This focus on short-term mating rather than long-term, committed, mating behaviors has major implications for perceptions of attractiveness. There is evidence that both women and men prioritize different traits for short-term and long-term mating preferences, prioritizing physical attractiveness for short-term mating (Li and Kenrick, 2006; Li 2007). However, these differences are more pronounced in males (Li and Kenrick, 2006; Lu and Chang, 2012), another important gendered comparison.

Contribution

This study contributes to the literature by applying the theoretical framework of gendered colorism and Harvey's Attraction Subscale to a sample of over 500 diverse students to explore the relationship between colorism, sex, and attraction. Research that relies on the gendered colorism framework is relatively sparse and focuses primarily on the African American community. As the original ICS and Attraction Subscale, which measures attraction to lighter skin tones, was validated on Black participants only, we are expanding its use to include respondents of other races, ethnicities, and skin tones. We focus our analyses on skin tone of the respondent, which is measured through participant self-assessment where they choose from a variety of images that mimic makeup color swatches.

To our knowledge, no study has focused only on the Attraction Subscale of the In-Group Colorism scale, and few studies use the full ICS. Considering the established empirical literature that correlates skin tone and attraction, it is appropriate to focus on the Attraction Scale when trying to explore the impact of sex on colorism and physical desirability. In all, this work adds to this body of literature by examining a racially diverse sample using the theory of gendered colorism and expand the usage of a survey that vitally addresses the significance which an individual places on skin tone as a factor of physical attractiveness.

Based on prior empirical and theoretical scholarship, we examine the following hypothesis: *Men will consider skin tone more important than women when determining physical beauty.*

Methodology

Harvey's Attraction Subscale

This study applies the In-Group Colorism Scale (ICS) developed by Harvey and colleagues (2017), which was developed to understand the extent to which Black individuals embrace skin tone as a personal and social characteristic. It focuses on five areas where skin color has proven on a large scale to have an impact: Self-Concept, Affiliation, Attraction, Impression Formation, and Upward Mobility (Harvey et al., 2017). The original survey was designed with Leonard J. Simms' (2008) guidelines on scale development and was validated using two separate studies with a total of 783 Black Americans. The final scale consists of twenty questions (four from each subscale), and was found to have strong internal consistency, with each individual section of the scale found to have a Cronbach's alpha over 0.75. Ultimately, the focus of Harvey and colleagues' (2017) study was to explain the development and validation of the In-Group Colorism Scale, but small correlational effects were noted across all subscales.

The present study focuses specifically on the Attraction subscale in the ICS to examine the relationship between sex, attraction, and skin tone. Correlational effects for the Attraction Subscale in the original study focused on the impact of racial identity, in that stronger racial identities were correlated with placing less significance on skin tone as a measure of attractiveness (Harvey et al., 2017).

Data

Data for this study come from a larger project entitled Shades of Justice that focused on the relationship between skin tone, race, and student perceptions of justice. The main research question that sparked this mixed method data collection effort was: How does skin tone impact perceptions of justice for aspiring criminal justice practitioners. In the spring of 2020, the electronic instrument was developed using the software Qualtrics. Academic departments related to crime, justice, law, and/or criminal justice were contacted across the United States including the top fifty ranked institutions and all relevant departments at Historically Black Colleges and Universities (HBCU). HBCUs were contacted to increase the representation of diverse participants considering the top ranked programs were mostly Predominantly White Institutions (PWI). A total of thirty-eight institutions agreed to distribute the survey to their students. The survey remained open for twelve weeks. For their participation, respondents had the option of being entered into a raffle for fifty Amazon gift cards worth ten dollars each.

Six-hundred and twenty-three (623) undergraduate and graduate students majoring in fields related to criminology and criminal justice participated in this study. Based on previous literature we considered the potential impact of relationship status on human attraction by measuring marital status. However, because most students were not married

and due to the potential influence of marriage on attraction outcomes (Li and Kenrick, 2006; Li 2007), these married individuals were excluded from analysis. Specifically, sixty-three individuals identified as currently married or married in the past and were thus excluded, so our final number of participants for analysis was five-hundred and sixty (560).

All participants were recruited through an email distributed by the Principal Investigator (the second author) or a faculty/staff person depending on the protocols of each institution. Prior to beginning the survey, participants read and electronically signed a consent form which included an overview of the survey and procedures. Contact information for the research team was provided. The Institutional Review Board (IRB) reviewed study protocol (Protocol Number: IRB-2021-9). Although these data are nonrandom and cannot be generalized to the United States population, the recruitment strategies for the sample were intentional and prioritized diversity. Therefore, the study contributes to a sparse body of findings that intentionally considers skin tone, race, and gender in human attraction and provides suggestions for future research in this area.

Dependent Variable

Modified In-Group Colorism Scale

The original In-Group Colorism Scale by Harvey and colleagues (2017) was modified slightly to focus specifically on the social constructs of interest. The focus of the current study was on the Attraction Subscale, one of five of the original subscales from the original In-Group Colorism Scale. These constructs were measured on a 5-point Likert-type scale (“Strongly Disagree” to “Strongly Agree”). Higher scores indicate a greater importance is placed on skin tone as a determinant of physical beauty. The Attraction Subscale consists of four items including “I’m primarily attracted to people of a certain skin tone;” “I prefer light skin over dark complexion skin when choosing romantic interests;” “I prefer a romantic partner who has the same skin tone as me;” and “Lighter skin tone makes others more attractive.” The Attraction Subscale had a raw Cronbach’s alpha of 0.82, which is comparable to the Attraction Subscale of the original study (0.81). Respondents had an average of 2.46 on the Attraction Subscale, meaning the sample leaned towards not having a skin tone preference but generally reported neutral responses.

Independent Variables

Skin Tone

Skin tone, one of the primary variables of interest, is measured using a twenty-five-item chart of color swatches, like swatches used for cosmetic brands. The idea of using a makeup image was that of the Principal Investigator on the colorism study, as most quantitative colorism instruments ask individuals to self-report their skin tone as light, medium, or dark. This seemed surprising as selecting a more nuanced skin shade is commonplace in the makeup industry. The image of swatches that were used was pulled from a generic Google search of makeup skin tones and inserted into the Qualtrics survey. Participants chose the color swatch that best represented their own skin tone which were coded from 1-25 representing the lightest to darkest skin tones. We recoded their response from 1-25 into three distinct categories (light, medium, and dark), where medium consisted of the central nine color swatches. Recoding was done so they would be fit for a multiple linear regression analysis (Aiken et al., 2003). The three-category approach was used based on previous colorism research that recodes the skin tone variable similarly (e.g., Burch 2015; Uzogara et al., 2014) as these are the most common descriptors for skin tone in the United States (Uzogara et al., 2014). To root these categories in the previous discussion of magazine

models, the average lightness values from the HSL color picker for each of these categories were as follows: 84.9 for light skin tones (compared to 77.3 for the light-skinned magazine models), 67.1 for medium skin tones (compared to 60.1 for the medium-skinned magazine models), and 40.8 for dark skin tones (compared to 37.3 for the dark-skinned magazine models). Thus, the lightness values fall into the same range for both samples. Light-skinned participants represent the baseline in this categorization. The frequencies for these variables are shown in Table 1.

Gender

Gender is measured using a binary variable male and female, where female = 1. Most participants in the sample identified as female, 75.4%. We acknowledge that gender is a fluid concept that cannot be fully captured with a binary measure. However, due to data limitations, we use this variable which closer captures biological sex or gender in the “traditional” sense. Male participants represent the baseline category.

Race and Ethnicity

The racial categories captured on the survey included White, Black, Asian, Other, and Mixed Race or Multiracial. The ethnic category of Hispanic/Latinx was measured separately, but we did not include Hispanic/Latinx participants in our analysis of “White only” or “Black only” participants, as there are unique experiences of colorism among this population (e.g., Chavez-Dueñas et al., 2014; Espino and Franz, 2002; Hersch 2011). We did include Hispanic/Latinx individuals in our analysis of non-White individuals, for the same reasons. The racial demographic breakdown of the sample is as follows: White:

Table 1. Descriptive Statistics

Dependent Variable	N	Mean	Std. Deviation	Minimum	Maximum
Attraction Subscale	560	2.46	0.997	1.00	5.00
Independent Variables					
Demographics					
Race	N (%)				
Black	87 (15.5)				
White Only	355 (63.4)				
Asian	33 (6.0)				
Other	3 (0.5)				
Multiracial	82 (14.6)				
Ethnicity	N (%)				
Hispanic or Latinx	79 (14.1)				
Not Hispanic or Latinx	481 (85.9)				
Other	N	Mean	Std. Deviation	Minimum	Maximum
Age	560	22.31	3.566	19.00	49.00
Income	560				
Skin Tone	N (%)				
Light Skin Tone	254 (46.4)				
Medium Skin Tone	217 (39.6)				
Dark Skin Tone	77 (14.0)				
Gender	N	Females	Males		
Gender	560	422	137		

63.4%, Black: 15.5%; Asian: 5.9%; Other: 0.53%; Multiracial: 14.6%. The sample was 14.1% Hispanic/Latinx.

Age

The average age of participants was twenty-two and ranged from nineteen to forty-nine. This wide range reflects a sample consisting of undergraduate and graduate students.

Income

Income was measured using twelve categories, ranging from less than \$9999 to \$150,000 or more. The median income of participants was in the sixth category, which equates to between \$50,000–\$59,000. In analysis, the categories were treated as a scale ranging from 1–12 with lower categories corresponding to lower incomes.

Analytical Strategy

To test our hypothesis, we ran three multiple linear regression models. Multiple linear regression is the appropriate model for these analyses as we controlled for multiple independent variables (i.e., skin tone, age, race, ethnicity, income, and gender) on the same single continuous dependent variable (i.e., Attraction Subscale score) (Aiken et al., 2003). The three models were conducted as a stepwise analysis, as we included additional variables with each consecutive model. In the first model, we ran a multiple linear regression analysis using the Attraction Subscale score as the dependent variable (measured from one to five) and the demographic variables of race, ethnicity, age, and income as independent variables. In the second model, we ran a multiple linear regression analysis using the Attraction Subscale score as the dependent variable and added skin tone as an independent variable along with the original demographic control variables. Finally, in the third model, we ran a multiple linear regression analysis using the Attraction Subscale score as the dependent variable and added gender as an independent variable along with skin tone and the original demographic control variables. We chose this method to better explain the influence of our central variables: skin tone and gender.

These regression analyses were run on four different intragroup samples: all participants, all non-White participants, Black only participants, and White only participants. This was done to more clearly emphasize differences between racial groups regarding attraction based on skin tone. Further, the original study was conducted on a sample of only Black Americans (Harvey et al., 2017). Therefore, analyses on subgroups of participants allows the present research to investigate the impact of using the ICS, particularly the Attraction Subscale, on a racially diverse sample.

Results

Consistent with the hypothesis, a significant positive correlation exists between gender and the Attraction Subscale, regardless of subgroup of participants. Irrespective of race, respondents who identified as female placed significantly less importance on skin tone as a measure of attractiveness in comparison to their male counterparts. This difference remained significant when controlling for other relevant demographic variables including skin color, race, ethnicity, age, and income. There were minor differences in level of significance for each of the samples, which are further outlined below.

All Participants

As shown in Table 2, results indicate that identifying as female, in comparison to identifying as male, is associated with a 0.62-point decrease on the Attraction Subscale. That is, being female is associated with placing a lesser significance on skin tone as a determinant of physical beauty. This difference is found when controlling for all other variables of interest ($p < 0.001$). In short, respondents of different sexes place different weights on the significance of skin tone when determining physical attraction. Specifically, respondents who identified as female place less weight on skin tone than their male counterparts. There was also a significant finding of race, in that identifying as mixed race ($n = 82$) is associated with placing less significance on skin tone as a determinant of physical beauty in comparison to identifying as White ($p < 0.05$). Skin color, ethnicity, age, and income were not statically significant.

All Non-White Participants

We separately analyzed all non-White participants (Table 3) because the influence of skin tone may be different for minoritized communities in contrast to White populations (Hunter 2016), and colorism can exist both intra- and interracial (Marira and Mitra, 2013). When excluding White participants from the sample and analyzing the non-White participants only, the findings are similar. Identifying as a non-White female, in comparison to identifying as a non-White male, is associated with a 0.70-point decrease on the Attraction Subscale ($p < 0.001$). That is, being female is associated with placing a lesser significance on skin tone as a determinant of physical beauty. Again, skin color, race, ethnicity, age, and income were not statistically significant.

Table 2. Multiple Linear Regression: All Participants

	Model 1:N=535*		Model 2:N=522*		Model 3:N=520*	
	Estimate	Std. Error	Estimate	Std. Error	Estimate	Std. Error
Demographics						
Race						
Black	-0.133	0.125	-0.162	0.156	-0.124	0.151
Asian	0.081	0.180	0.063	0.186	0.027	0.181
Other	-0.182	0.210	-0.214	0.219	-0.256	0.212
Multiracial	-0.352*	0.156	-0.376*	0.162	-0.351*	0.156
Ethnicity						
Hispanic/Latinx	-0.088	0.145	-0.059	0.148	-0.029	0.143
Other						
Age	-0.012	0.013	-0.010	0.014	-0.012	0.013
Income	0.004	0.012	0.003	0.013	-0.003	0.012
Skin Tone						
Medium Skin Tone	-	-	-0.022	0.095	-0.050	0.091
Dark Skin Tone	-	-	0.059	0.163	0.016	0.158
Gender						
Female	-	-	-	-	-0.622***	0.096
Intercept	2.768***	0.340	2.742***	0.353	3.314***	0.352
	<i>Adjusted R²: 0.0055</i>		<i>Adjusted R²: 0.0004</i>		<i>Adjusted R²: 0.0727</i>	

Note: **** 0; *** 0.001; ** 0.01

All Black-Only Participants

We also separately analyzed Black participants (Table 4) because most colorism research in the United States focuses on the experience of Black individuals in America. Similarly, when focusing exclusively on Black participants, this association between gender and importance of skin tone still exists. The results indicate that identifying as a Black female, in comparison to identifying as a Black male, is associated with a 0.67-point decrease on the

Table 3. Multiple Linear Regression: Non-White Participants

	Model 1: N=187*		Model 2: N=180*		Model 3: N=178*	
	Estimate	Std. Error	Estimate	Std. Error	Estimate	Std. Error
Demographics						
Race						
Asian	0.230	0.186	0.216	0.130	0.134	0.188
Other	-0.056	0.259	-0.051	0.263	-0.131	0.250
Multiracial	-0.195	0.173	-0.206	0.182	-0.215	0.172
Ethnicity						
Hispanic/Latinx	-0.061	0.226	-0.048	0.227	-0.027	0.215
Other						
Age	0.018	0.018	0.028	0.020	0.020	0.019
Income	-0.001	0.020	-0.006	0.020	-0.008	0.019
Skin Tone						
Medium Skin Tone	-	-	0.045	0.170	-0.031	0.162
Dark Skin Tone	-	-	0.074	0.168	-0.006	0.161
Gender						
Female	-	-	-	-	-0.699***	0.147
Intercept	1.987***	0.471	1.719***	0.500	2.554***	0.505
	<i>Adjusted R²: 0.002</i>		<i>Adjusted R²: -0.0004</i>		<i>Adjusted R²: 0.107</i>	

Note: **** 0; *** 0.001; ** 0.01

Table 4. Multiple Linear Regression: White Participants

	Model 1: N=312*		Model 2: N=306*		Model 3: N=305*	
	Estimate	Std. Error	Estimate	Std. Error	Estimate	Std. Error
Demographics						
Other						
Age	-0.037*	0.018	-0.037*	0.018	-0.036*	0.018
Income	0.008	0.016	0.007	0.016	0.005	0.016
Skin Tone						
Medium Skin Tone	-	-	-0.014	0.118	-0.019	0.115
Gender						
Female	-	-	-	-	-0.547***	0.127
Intercept	3.297***	0.471	3.296***	0.481	3.700***	0.477
	<i>Adjusted R²: 0.012</i>		<i>Adjusted R²: 0.008</i>		<i>Adjusted R²: 0.061</i>	

Note: **** 0; *** 0.001; ** 0.01

Table 5. Multiple Linear Regression: Black Participants

	Model 1: N=75*		Model 2: N=70*		Model 3: N=69*	
	Estimate	Std. Error	Estimate	Std. Error	Estimate	Std. Error
Demographics						
Other						
Age	-0.006	0.026	-0.002	0.031	-0.018	0.030
Income	0.022	0.030	0.025	0.032	0.019	0.030
Skin Tone						
Medium Skin Tone	-	-	0.074	0.203	-0.012	0.289
Dark Skin Tone	-	-	0.234	0.231	0.241	0.219
Gender						
Female	-	-	-	-	-0.673**	0.223
Intercept	2.384***	0.669	2.132***	0.766	3.078***	0.795
	<i>Adjusted R²: -0.017</i>		<i>Adjusted R²: -0.028</i>		<i>Adjusted R²: 0.074</i>	

Note: **** 0; *** 0.001; ** 0.01

Attraction Subscale. That is, being female is associated with placing a lesser significance on skin tone as a determinant of physical beauty ($p < 0.005$). As in prior analyses, skin color, age, and income were not statistically significant.

All White-Only Participants

We analyzed all White participants (Table 5) because, while previous research has often focused on the effects of intra-racial colorism (Hannon 2015), there is strong evidence that colorism occurs among all White groups (Hannon 2015). Similarly in this sample, we found that identifying as a White female, in comparison to identifying as a White male, is associated with a 0.55-point decrease on the Attraction Subscale ($p < 0.001$). That is, being female is associated with placing a lesser significance on skin tone as a determinant of physical beauty. With this sample, an increase in age is associated with a slight increase on the Attraction Subscale, or growing older is associated with placing a lesser significance on skin tone as a determinant of physical beauty ($p < 0.05$). Consistent with previous models, skin color, ethnicity, and income were not statistically significant.

Exploratory Analysis

The survey included a single behavioral item: “Have you ever used skin lightening or skin tanning agents to purposefully change your skin color?” (Dixon and Telles, 2017). We found that 31.1% of participants who identified as female answered yes to this question, while only 6.6% of males had done so. This question is ambiguous about which direction participants attempted to change the color of their skin (e.g., by tanning or beaching their skin), therefore any conclusions about skin lightning among our sample are outside the scope of our dataset. However, when the same analysis was done with non-White participants only, the percentages still have a large discrepancy with about 13.8% of non-White males reporting changing their skin tone and 25.7% of non-White females reporting the same. From these findings we can speculate that it is probably less likely that non-White participants use tanning techniques, but we cannot draw any definite conclusions. Further research in this area is warranted.

Discussion

There is a long history of research regarding attraction, especially the factors that are most consistently associated with attractiveness (Franzoi and Herzog, 1987; Keating 1985; Muñoz-Reyes et al., 2015), as well as the influence attractiveness has in social, educational, and other life outcomes (Frevort and Walker, 2014; Langlois et al., 2000; Plaut et al., 2009; Umberson and Hughes, 1987). As seen in research on attraction, skin color can be associated with major life outcomes including social connections, educational attainment, occupational future, and criminal justice experiences and outcomes (Crutchfield et al., 2017; Keith and Herring, 1991; King and Johnson, 2016; Ryabov 2013).

Some research focuses on the correlation between skin tone and physical attractiveness. Mark E. Hill (2002) finds overall that skin tone influences perceived physical attractiveness, with lighter skin tone as preferable to beauty. However, these results only applied to the evaluation of the attractiveness of Black women. Research has shown that skin color has more of an impact on women than men, with Eurocentric standards of beauty regarded as more of a feminine characteristic (Fears 1998; Hill 2002). Thus, this limited research infers that those with darker skin tones, and especially women, may face intersectional negative implications of conventional attractiveness standards.

The current study aimed to focus on this synergistic effect of gender and skin tone by expanding the use of The In-Group Colorism Scale created by Harvey and colleagues in 2017. While most colorism research focuses on macro-level phenomena of social outcome variables, we look to understand the impact of gender and skin tone in personal relationships and the concept of attraction. We analyzed one subscale within the ICS (the Attraction Subscale) using the key predictor variable of gender and various potentially relevant control variables. We hypothesized that gender would have a significant relationship with the Attraction Subscale, due to the history of Eurocentric standards of beauty that are typically aimed towards individuals identifying as women and not men.

The regression analysis resulted in a significant negative correlation between gender and scores on the Attraction Subscale, meaning that participants who identified as female placed significantly less weight on skin tone as a measure of attractiveness than participants who identified as male. This result remained consistent when controlling for relevant variables and within each subsample of participants, divided by racial identification. These results are consistent with past research the importance of physical attractiveness among females for heterosexual males (Frederick and Haselton, 2007), and the particularly gendered experiences of colorism among females, such as dissatisfaction with skin tone (Harper and Choma, 2019; Swami et al., 2013).

These results contribute to the literature on colorism by emphasizing the strong gender discrepancies that still exist within this discrimination based on skin tone. In interpersonal relationships and personal determinations of attractiveness, it is more important for women to have an “ideal” skin tone than men. These standards which equate lighter skin with beauty are continually reinforced through fashion magazines, celebrity culture, movies, and TV shows—all of which are forms of media that are followed, emulated, and internalized by women globally (Fears 1998; Parameswaran and Cardoza, 2009; Steele 2016). In our exploratory analysis of popular magazine covers alone this finding was obvious, with Black models selected for inclusion in magazines having lighter skin tones or, possibly, lightened in the photo.

The internalization of skin tone dissatisfaction is highlighted in our finding that almost one-third of female-identifying participants in our sample have purposefully changed their skin tone. While further research would be needed to parse out the differences between skin lightening and skin tanning as well as the motivations behind these practices, these results signal that discontent with skin tone leads to actions to change it, something that is

seen significantly more in women than men, which is consistent with the multibillion-dollar skin lightening industry that is seen worldwide (Shroff et al., 2018). This also consistent with the evolutionary psychology hypothesis which contends that male desirability is determined more by economic earning potential than physical attraction, whereas female desirability is determined more by youth and beauty (Buss and Schmitt, 2019). That is, when men are evaluated by potential partners, financial status is more important than physical traits. Women, on the other hand, are assessed more on their physical traits than other traits.

The regression analysis also resulted in further significant findings which highlight critical areas for future research within the colorism and perceptions of attractiveness. In the regression analysis with all participants, those that identify as multiracial placed significantly less weight on skin tone as a measure of attractiveness, in comparison to White respondents. This finding was not seen in the regression analysis of non-White participants only, potentially implying the importance of further comparison between individuals who identify as White and those who identify as multiracial. This finding is consistent with colorism literature which shows that experiences of multiracial individuals differ significantly from individuals who identify with one race (Ozaki and Parson, 2016; Thomas-Collins 2021).

Furthermore, the results indicate that strong evidence of skin tone preference among only White participants exists, adding to the necessary body of research regarding “White colorism” (Hannon 2015). While much of past research has focused on intra-racial colorism, our results support research indicating that colorism is observed in White only groups as well (Hannon 2015). For example, we can see in comparing Table 4 and Table 5 that the effects between the White-only and Black-only samples look similar. While we cannot directly compare these regression results, we can see that about 7.4% of the variance in the Attraction Subscale is explained by the predictors in Model 3 of our Black sample (Table 5), while only slightly less of the variance (6.1%) is explained by the predictors in Model 3 of our White sample (Table 4). However, Since Black participants made up a smaller proportion of our sample than White participants, further research would be necessary to compare these groups empirically to see whether there is evidence of more colorism effects from White individuals than Black individuals.

Finally, in the regression analysis with White participants only, there was a significant finding of age in that the older the participants were the less weight was placed on skin tone as a measure of attractiveness. This significant result only occurred when the independent variable of skin tone was added into the regression analysis. While our sample did have an age range of thirty years, almost 75% of the sample was between the ages of nineteen and twenty-three. Thus, further research would be necessary to determine whether there is a relationship between skin tone, age, and race.

Limitations

A potential limitation to our study is the lack of external validity when attempting to generalize to a larger population. Not only are these participants strictly U.S. undergraduate and graduate students, but they represent a specific subsection of U.S. undergraduate and graduate students due to the focus of our overall Shades of Justice investigation. Black students make up only 14% of all enrolled college students in the United States (Snyder et al., 2019); while our participants are representative of race in higher education generally, the focus of this research is on effects due to skin tone, a phenomenon that affects minoritized students and not monoracial White students.

Therefore, a larger percentage of minoritized students would be important in reassessing the results of this investigation.

There are other limitations that are relevant to the usage of self-report survey methods. First, this online survey included only self-report questions. Generally, self-report surveys have the potential to overlook complexities in self-disclosure of race and ethnicity. This is true, for example, for some individuals who identified as minoritized racially as well as ethnically, which may uniquely impact the perceptions of colorism among these groups. Similarly, mixed race individuals have a variety of experiences with colorism, and the survey tool and analysis cannot fully account for these individual differences.

More specifically, participants were required to self-report how they would classify their skin tone. Without the ability to have a trained investigator measure skin tone, we run the risk of participants categorizing themselves differently due to explicit or implicit social desirability (Travassos et al., 2011). However, due to the nature of the scale as a measurement of the *personal* significance one places on skin tone as a determinant of social factors, it can be argued that it is more important how an individual perceives themselves rather than what is the actual measurement of their skin tone. As seen in our exploratory analysis, a difference did seem to exist between self-categorization techniques, suggesting that further research should be done on this phenomenon to understand the effects of self-categorization of skin tone.

Implications and Conclusion

Despite these limitations, the results of this study have three major implications for our understanding of attraction. First, skin tone matters more for men suggesting societal messaging about skin tone and beauty standards are not equally framed across sexes. For practitioners involved in shaping beauty standards, we encourage consideration on how framing can potentially promote prejudice against darker skinned persons, regardless of race, in terms of attraction. Second, pressure to attain certain beauty standards—particularly those related to skin tone—may be felt more distinctly by individuals seeking a male partner. This pressure may translate to engaging in unhealthy or negative behaviors such as skin bleaching (Blay 2011; de Souza 2008; Hunter 2011). Finally, conversations about attraction and skin tone should take place both within and across racial groups. Frameworks such as gendered colorism and scales like Harvey's In-Group Colorism scale are encouraged to be applied outside of the African American/Black community as the impact of skin tone is indiscriminate.

Additionally, this study presents several directions for future research. First, we suggest studies explore the differences in attraction for partners that are being considered for short- and long-term relationships. In an era of "hook up" culture where individuals engage in temporary intimate interactions (Garcia et al., 2012) and an increasing divorce rate (Kennedy and Ruggles, 2014), a ripe area of research would be to explore how skin tone shapes these types of connections differently. Perhaps skin tone is not as influential in shaping perceptions of attraction for short term connections in comparison to longer term relationships. In addition, individuals with more experience in relationships may perceive skin tone differently than those with less experience. For example, Monk (2014) finds that lighter-skinned Black individuals tend to also have lighter-skinned spouses. In contrast, our data shows no connection between an individual's skin tone and their perception of skin tone as a distinction of physical beauty, but we specifically excluded participants who were married or had ever been married and asked simply about perceptions of attraction. Further research would be needed in this area to explore these concepts in more detail.

Second, future research should look at attraction towards individuals across skin tones and race to better separate out the way the public views these related but distinct concepts

(Hunter 2002). Overall, our results show significant evidence for the importance of skin tone in perceptions of attraction, but we were unable to compare these results with answers from the same sample about the importance of race generally in perceptions of attraction. While this comparison was not the focus of the current study, it would allow for more complex conversations about skin color, race, and attraction.

Further, future research should focus on demographic differences that were outside the scope of our study. For example, considering whether HBCU status impacts attraction and preference for skin tone may provide some interesting insights into socialization and racial identities. Additionally, it would be important to compare these results to a non-heterosexual sample and outside the traditional gender binary to better understand the implications of colorism across diverse populations.

Finally, future research should also rely on both qualitative and quantitative methodology. While quantitative methodology, as used in this study, gives overall patterns in the data, qualitative methods provide nuances, narratives, and processes behind these trends. For colorism, sex, and attraction, qualitative methods can facilitate better understanding across a range of groups including the complexities of sex and sexuality, racial/ethnic identity, and understandings of the impact of skin tone in decision making. Furthermore, researchers should consider employing the theoretical framework of gendered colorism in mixed methods studies as it allows for the meaningful integration of multiple aspects of identity as a core part of analysis. Related, our final suggestion is for future studies to further explore colorism's influence on attraction for individuals who identify as mixed than those who identify with a single racial/ethnic category, as found in the results. This can provide helpful insights as demographics in the United States continue to shift towards a majority minoritized (Frey 2020).

In all, this work contributes to the sparse body of literature by aligning with previous findings and applying the gendered colorism framework and Harvey's Attraction Subscale to a diverse, large sample of graduate and undergraduate students. This study found that being female is associated with placing less importance on skin tone as a determinant of beauty, regardless of race. Therefore, colorism may have a more significant impact on those seeking to attract men. This lopsided perception of skin tone must be a continued part of study and broader social conversations to avoid individuals engaging in behavior that is potentially harmful mentally, emotionally, and physically.

Notes

¹ These magazines included *Cosmopolitan*, *Harper's BAZAAR*, *Vanity Fair*, *Elle*, *Vogue*, *InStyle*, *New Beauty*, *Allure*, *Marie Claire*, and *Essence*.

² We refer to populations as minoritized instead of minorities because the former term acknowledges the role of systems in determining which groups are given power and resources; the latter label suggests an inherent inferiority of certain groups to others.

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