

Disproportionate Chemical Exposure: How the Marketing and Production of Beauty Products in the United States Impose Health Burdens on Women

Kavya Shivaram

Abstract

The use of beauty products in the daily lives of women is more prevalent now than ever in this era of mass consumerism. Yet, a lack of FDA regulation for the production of beauty products puts women's health at great risk. Misleading labeling as well as lack of proper labeling allows companies to get away with having harmful chemicals such as phthalates, parabens, and phenols in their products, thus leading to increased health burdens that may affect a woman's own health in addition to her future child(ren)'s health. Moreover, low-income women as well as women of color experience even greater chemical exposure due to lack of access to low-chemical products and disproportionate chemical contents in products marketed specifically towards them. A literary analysis will be performed of current scholarship that informs about the politics of the beauty industry as well as primary scientific research that details the health risks for women resulting from certain chemicals in beauty products. Additionally, an ecofeminist lens will be applied throughout this analysis to examine the relationship between the production and marketing of beauty products and disproportionate health burdens on women. Through highlighting data about the disproportionate chemical exposure women experience and the means through which this occurs, this article will bring attention to the injustices imposed on women's bodies and emphasize the need for enforceable policy with stricter regulations to decrease the use of such chemicals.

Introduction

The beauty industry has long used marketing strategies to draw individuals, particularly women, into a never-ending cycle of increased consumption. It is no wonder that beauty products are a huge part of the lives of many young girls and women. However, the actual ingredients of these products are often unknown to the consumers, due to either the misleading labels or lack of knowledge about the ingredients. As a result, many companies have harmful chemicals in their products without consumers' awareness, largely due to poor regulations by institutions such as the Food and Drug Administration (FDA). In the cases where consumers are aware of the toxins in their products, the use of "natural products" is encouraged as an alternative. Yet, this alternative is often not available to consumers of lower socioeconomic status. In many cases, these low-income women are also minorities, and products targeted specifically to these groups, namely hair and skin care products, contain large amounts of harmful chemicals such as phthalates, parabens, and phenols. The largely unregulated production of beauty products in conjunction with current marketing strategies perpetuates disproportionate chemical exposure for women, especially low-income, women of color.

An ecofeminist theoretical lens will be utilized to examine the relationship between the production and marketing of beauty products and disproportionate health burdens on women. The ecofeminist framework used in this paper is defined by ecofeminist philosopher Karen J. Warren to establish a connection between oppressive institutional structures of power, the environment, and women's everyday experiences (2000). A literary analysis will be conducted on a current scholarship that informs about the politics of the beauty industry to delve into marketing strategies that bring women into a cycle of purchasing beauty products. It will also inspect the current regulations in place for cosmetics. Additional literary analysis will be performed on primary scientific research articles that detail the health risks women gain from exposure to certain chemicals in beauty products to show the disproportionate exposure women experience. A more detailed examination of chemicals found in hair and skin care products used by women of color, such as hair relaxers and skin lighteners, will reveal the increased disparity in chemical exposure for these women. By bringing attention to the injustices imposed on women's bodies from use of toxins in beauty products, this article ultimately emphasizes the need for stricter, enforceable regulations to decrease their use.

Consumerism and Marketing

In this age of ever-growing production, beauty products are marketed to young girls and women by using common Western virtues of femininity that manifest in physical appearance. Society dictates the continued value in maintaining a youthful appearance, which disproportionately targets women over men. This notion is reinforced in media advertisements for

beauty products that use young female models with smooth, wrinkle-free skin to embody fantasies of flawless perfection (Brown & Knight, 2015). Cosmetic brands often use famous female celebrities as well to “[create] a positive image in the minds of consumers thus... influencing consumer behavior” (Brown & Knight, 2015, p. 81). Current marketing strategies and advertisements convince women that the act of aging is a problem that should be treated, thus pushing forward anti-aging creams and skin care products in an act of exploitation. The idea that beauty products are the solution to maintaining a youthful, feminine appearance in turn gets passed down from older women to young girls, encouraging use of cosmetics and youth-promoting skin products at younger ages to preserve their looks.

Women face daily pressure to meet standards of youthful appearances free of blemishes and imperfections that manifests not only in their personal lives, but in the workplace as well. Appearance standards are prevalent in a variety of occupations, with a strong correlation existing between professional success and the use of makeup in the workplace. Several women have found that makeup use in the professional field is “a significant ‘part of competing’” and “[appearing] more competent” (Dellinger and Williams, 1997, p. 165). Even women who regularly wear makeup may experience discouraging reactions when forgoing their usual routine, often being asked by coworkers whether they are tired or feeling ill, thus negatively impacting their attitudes and confidence. Given the competitive advantage that women may gain from wearing makeup, it is clear that though some may choose not to conform to beauty standards, there is a tangible cost associated with doing so. The beauty standards that countless women struggle to meet additionally emphasize whiteness and white beauty ideals, some of which include fair skin and straight hair. These predominantly white beauty ideals are simply unrealistic for women of color, yet the value that they are given in society drives many women of color to buy multitudes of products such as hair relaxers and skin lighteners in an attempt to meet beauty standards. Women experience the illusion of choice to use makeup, which when combined with the highly unattainable beauty ideals, creates an environment in which beauty products are viewed as essential and ultimately become ubiquitous.

Despite the large numbers of women who purchase cosmetics on a daily basis, it is unclear how many actually recognize the ingredients listed on the products. The fact that FDA regulations do not require the listing of individual fragrance ingredients raises concern, especially when considering that many women may inadvertently utilize products with harmful toxins without having complete knowledge about the dangers of certain chemicals in the products they use. General consumer awareness of the presence of chemicals in beauty products has been raised in the past few years, with popular sources such as *The Guardian* releasing articles informing that “women in the US apply an average of 168 chemicals to their faces and bodies every day... between cosmetics, perfumes, personal

care products and feminine hygiene products” (Westervelt, 2015). Despite attempts to raise awareness of harmful chemicals found in beauty products, it is time consuming and thus unrealistic to expect women to analyze countless sources of information which may have conflicting perspectives. Furthermore, research on chemicals in cosmetics is seen by some as insufficient, as reflected by Nancy Buermeyer, senior policy strategist for Breast Cancer Fund, who shares that “we don’t know enough about chemicals on any front and certainly not about how they impact women because we haven’t spent the time or energy to look at it” (Westervelt, 2015). While raising awareness of harmful chemicals found in cosmetics can aid women in being wary when purchasing beauty products, a deeper issue lies in the fact that cosmetic companies are creating products with toxins to begin with.

Production and Regulation of Beauty Products

The term “beauty products” is interchangeable with “cosmetics” in this analysis, which is defined by the U.S. Food & Drug Administration (FDA) as “articles intended to be rubbed, poured, sprinkled, or sprayed on, introduced into, or otherwise applied to the human body...for cleansing, beautifying, promoting attractiveness, or altering the appearance” ((FD&C Act, sec. 201(i)). Under this definition, common products such as perfume, shampoo, skin care, and facial creams can be categorized as cosmetics. Current regulations by the U.S. Food & Drug Administration do not require beauty products or their ingredients, other than color additives, to be approved prior to hitting the market (“Laws & Regulations,” 2005). While there are regulations in place that allow the FDA to remove cosmetics from the market if they are misbranded or contain substances detrimental to health, this article argues that this regulation is not sufficient in preventing the proliferation of said products, and worse, the potential toxins within them. Once beauty products are on the market, they often spread rapidly through mass consumerism, thus decreasing the odds of successfully recalling all products that have harmful chemicals in them.

Advertising strategies for beauty products sold online and in-stores prompt mass purchase by consumers by releasing a limited supply of certain products at a time, thus “increasing the perceived value of the product” and “[helping] give estimates of demand to producers” according to a former employee of a celebrity-owned beauty brand (Stiegman, 2017). Beauty products that employ this strategy circulate rapidly on the market and remain there due to this idea of scarcity; however, it is also for this reason that when products with positive consumer perception are recalled, it may not be effective. This was the case with the infamous WEN by Chaz Dean Cleansing Conditioner that was widely used by average consumers and celebrities alike. A 2014 FDA investigation into this product was prompted by over 1,300 complaints to the agency over hair loss and scalp irritation after using the Cleansing Conditioners, resulting in

WEN settling a class-action lawsuit and issuing a recall for the product. Yet even after the product was issued for recall, it was still widely available for public purchase on several other websites (Harvey, 2018).

The Federal Food, Drug, and Cosmetic Act (FD&C Act) declares that the FDA has no authority to declare a recall, instead surveying and regulating recalls initiated by the cosmetic firms themselves by “[assigning] a classification to indicate the degree of hazard posed by a product under recall” and “[making] sure that the product is destroyed or suitably reconditioned” (“Laws & Regulations,” 2005). Of the three classes of health hazards used by the FDA, the greatest concern occurs when there is “reasonable probability that the use of, or exposure to, a violative product will cause serious adverse health consequences or death,” yet the threshold for serious adverse health consequences remains unclear (“Laws & Regulations,” 2005). These regulations rely on cosmetic firms to issue effective recalls on their own accord and to notify customers in accordance to the health hazard level the beauty product poses. However, the ambiguity in determining whether ingredients are defined as causative of serious adverse health consequences diminishes the importance and ability in recognizing long-term health deterioration through bioaccumulation of harmful toxins.

Chemical Exposure

Lack of sufficient regulation by the FDA has allowed companies to have harmful chemicals in their products without consumers’ awareness, and this negligence has increased a woman’s risk of chemical exposure and long-term health decline resulting from bioaccumulation. A study conducted by Parlett, Calafat, and Swan (2017) examined women’s exposure to phthalates, chemicals that are often found in personal care products such as fragrances or hair products. More recent research on phthalates have shown that some may affect human reproduction or development, causing concern as the extensive presence of phthalates in various cosmetics is becoming more apparent (“Phthalates: Your Environment,” 2017). The study found that women who used personal care products such as perfumes or fragrances often had monoethyl phthalate (MEP) in urine samples, and women who used basic hair care products also had MEP in urine samples (Parlett et al., 2012, p. 203-5). These findings highlight how pervasive toxins are in commonly used personal care products, made even more alarming in that the use of personal care products was extremely common in the study’s recently pregnant participants.

Another study has found that teenage girls may be at even greater risk of disproportionate chemical exposure, with the average adult women using around 12 personal care products daily (Harley et al., 2016). The average teenage girl uses about 17 (Harley et al., 2016). The HERMOSA Intervention Study examined cosmetics as a source of exposure to phthalates, parabens, and phenols, three different types of chemicals that

are widely found in makeup, perfumes, soaps, etc. These chemicals are known to be potentially endocrine-disrupting (Harley et al., 2016). A group of 100 primarily Mexican American, low-income adolescents were recruited to determine the effects of switching to low-chemical products for 3 days through measuring urinary concentration. Pre-intervention, over 90% of the participants had detectable levels of phthalates, parabens, and phenols in their urine samples, and half of the participants reported wearing makeup and using moisturizer at least 4 times a week. It was found that in just 3 days, “urinary concentrations of mono-ethyl phthalate (MEP) decreased by 27.4% on average... and methyl and propyl paraben concentrations decreased by 43.9% and 45.4%, respectively,” demonstrating just how many chemicals are in the products that teenage girls use on a daily basis (Harley et al., 2016, p. 1600).

Surprisingly, it was found that concentrations of ethyl and butyl parabens increased despite all of the replaced beauty products being indicated as paraben-free (Harley et al., 2016).

Additionally, it has been found that “products marketed as ‘natural’ may also contain phthalates, even though consumers believe them to be chemical-free” (Parlett et al., 2012, p. 204). Evidence of chemical exposure imposed upon teenage girls and adult women, and potentially their offspring, even in light of choosing products that are deemed “chemical-free” make for the case that individual precaution is not always enough when trying to reduce one’s chemical exposure. I argue that this fuels the need for flipping the script on who is accountable for chemical exposure. Rather than primarily trying to educate individual consumers about potential toxins that should be avoided in cosmetics, the responsibility should be put on the companies who are knowingly releasing products that contain harmful chemicals.

Disproportionate Exposure and Access to Alternatives

In light of all the potential toxins that have been found in everyday personal care products, a move has been made towards detoxing from current products and moving towards green or natural products. While this is practiced by some women, others – particularly those who are low-income – do not have the same financial means to do so. The ‘natural’ label for products that are advertised as a replacement for drugstore beauty products on the market is “one of the most common and misleading claims” and promotes the notion that products are “found in nature, without chemicals or human transformations” (Cervellon & Carey, 2011, p. 119). The beauty industry lacks clear regulations for natural labelling that pose similar concerns to FDA regulations, especially considering “none of these labels require manufacturers to provide detailed information about what is involved in their production processes” (Cervellon & Carey, 2011, p. 119). Many of these products also receive eco-labels that act as certification for “products which meet certain standards regarding ingredients and processes of manufacturing that

preserve humans, animals and the environment.” These labels can be obtained through both private companies or public organizations (Cervellon & Carey, 2011, p. 120). However, obtaining eco-labels often incurs a higher cost of production, translating into a higher market price as a result and leading to less accessibility for low-income women. Even when looking to purchase low-chemical makeup that does not necessarily have the ‘natural’ label, researchers found that they were not sold in many places, were often expensive, and were “particularly difficult to find in low-income communities” (Harley et al., 2016, p. 1606). This lack of both financial and physical accessibility to alternatives predisposes low-income women to disproportionate chemical exposures and leaves them with almost no means of protecting their health.

In addition to low-income women having increased exposure to harmful chemicals, women of color also experience disproportionate health burdens from the ingredients in beauty products targeted specifically to their demographics. Data from the National Health and Nutrition Examination Survey (NHANES) has found that African Americans and Mexican Americans have higher levels of phthalates and parabens than do whites (CDC, 2012). Furthermore, certain hair care products, like hair relaxers, used more frequently by Black women than White women contain potential endocrine disruptors and “substantial amounts of formaldehyde” that can be quite concerning for the health of Black women and children (Helm et al., 2018, p. 449). A study by Helm et al. examined various hair products in 6 categories used by Black women to test for 66 chemicals related to endocrine disruption and asthma (2018). 45 of the 66 chemicals tested for were detected in the hair products examined, with 78% of the products containing parabens and diethyl phthalate (DEP) (Helm et al., 2018). All products “contained at least one of 19 targeted fragrance chemicals” and others such as hair relaxers frequently had multiple fragrances (Helm et al., 2018, p. 451). Moreover, it was found that “only 16% of chemicals found above the method reporting limit (MRL) were listed on the ingredient label” of the products examined (Helm et al., 2018, p. 452). The alarming issue of the largely unregulated production of beauty products in the United States is highlighted once again as this study found that eleven products contained seven chemicals that are prohibited under the European Union (EU) Cosmetics Directive “on the basis of cancer, female reproductive toxicity, and developmental toxicity” (Helm et al., 2018, p. 453). Furthermore, five of these toxic chemicals were found in hair relaxers for children. The extensive range of chemicals prevalent in hair products used more commonly by Black women than White women in combination with a lack of universal, federal regulations of cosmetic production in the United States creates a shocking disparity in the bioaccumulation experienced by Black women and children.

Western beauty standards have been marketed towards Eastern cultures since the global expansion of the US beauty industry, and this has

prompted the widespread, targeted marketing of skin lightening creams towards women in India, the Middle East, Southeast Asia, and Africa (Zota and Shamasunder, 2017). Many of the skin lightening creams used by these women of color contain harsh chemicals and metals, most commonly inorganic mercury. Frequent use of these skin lightening creams has resulted in “multiple cases of mercury poisoning, which is characterized by damage to the kidneys and the central nervous system” (Zota and Shamasunder, 2017, p. 2). Among other health concerns, it was found that both acute and chronic exposure to inorganic mercury in skin lighteners can result in renal, neurologic, and dermal toxicity (Ho et al., 2017, p. 75). A study performed by Peltzer, Pengpid, and James investigated the use of skin lighteners in college students across 26 different countries and found that although Southeast Asian students had relatively light skin tones, they had the “highest prevalence of skin lightener use (36.0%)... compared to other study regions” (2016, p. 168). Furthermore, a significant difference in gender revealed that women were more likely to utilize skin lighteners, and this was “possibly attributed to the need for sexual attractiveness and beauty, particularly among single women who [had] a desire to get married” (Peltzer et al., 2016, p. 170). It is clear that the ideals of whiteness and Western beauty have been ingrained into women of color, and companies have drawn upon such ideals while marketing skin lightening beauty products. This phenomenon has led to health disparities among these women as compared to White women.

Conclusion

The use of beauty products in women’s daily lives is more prevalent now than ever. Yet the lack of FDA regulation for cosmetic production puts women’s health at great risk by disproportionately exposing them to harmful chemicals that may affect their own health and their future children’s health. While some women are able to purchase personal care products that are low-chemical or chemical free, many low-income women do not have this privilege, as these products are often financially inaccessible. Thus, these women are forced to bear increased chemical burdens. More disturbingly, women of color experience increased chemical exposure through use of products that are marketed specifically towards them. Personal precaution in buying beauty products is simply not possible for all women, whether it be for financial reasons or because of lack of proper ingredient labeling. While accessible education regarding harmful chemicals in beauty products can and does have a vital role in ameliorating disproportionate chemical exposure, the majority of this burden should not fall on the shoulders of the consumer, but rather on the companies producing cosmetics.

A step in this direction has been made with the proposal of the *Personal Care Products Safety Act* by Senators Dianne Feinstein and Susan Collins, which would provide the FDA the authority to initiate

personal care product recalls and require companies to post complete label information online (“Feinstein, Collins Introduce Bill,” 2017). The bill would also demand that cosmetic companies disclose a complete list of ingredients used in products to the FDA. These labels would also be required to have specific warnings for “products that contain ingredients not suitable for all populations” (“Personal Care Products Safety Act,” 2019). But one of the greatest strengths of the *Personal Care Products Safety Act* lies in the newfound responsibility of the FDA to review the safety of at least five ingredients, or chemicals, per year, including pervasive toxins such as parabens and phthalates. Passing the bill would increase the accessibility of safe personal care products, as argued by Gregg Renfrew, founder of the company Beautycounter, who has lobbied for legislative reform of the beauty industry for the past six years (“Feinstein, Collins Introduce Bill,” 2017). Renfrew emphasizes the goal of the *Personal Care Products Safety Act* is for “safer products to be accessible to all Americans, regardless of socioeconomic background” while also “[requiring] companies to do the right thing on behalf of the American consumer” (Rihter, 2019).

In light of limited access to natural products for low-income women and/or women of color, regulation from the FDA itself may be the most viable approach to ensure solutions to toxic products operate to protect women of all backgrounds.

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