CULTURE, MEDIA & FILM | RESEARCH ARTICLE

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My crown and glory: Community, identity, culture, and Black women’s concerns of hair product-related breast cancer risk

Dede K. Teteh1*, Susanne B. Montgomery2, Sabine Monice2, Laura Stiel2, Phyllis Y. Clark1 and Eudora Mitchell3

Abstract: Breast cancer (BC) incidence rates for Black and non-Hispanic White women have recently converged; however, Black women continue to die at higher rates from the disease. Black women also use hair products containing hormonally active chemicals at higher rates than other races and ethnic groups. Studies now link chemical components in hair and personal care products to breast cancer risk. Using a community-based participatory research approach, this qualitative study explored community concerns about the role of hair products on breast cancer risk. Focus groups and key informant interviews using triangulation to assure relevant perspectives (women with and without breast cancer as well as younger and older women of differing SES, stylists) explored women’s perceived risk and knowledge of breast cancer risk factors. Data analysis used grounded theory methods of coding facilitated by QDA-Miner. Findings from 91 participants indicated varying levels of awareness but near universal concerns about the potential link of hair products to BC. Breast cancer is a significant concern for Black women and their loved ones. While women were concerned and some respondents believed ingredients in hair products may be harmful to their health, they wrestled with the idea of making changes as hair for most is aligned with beauty, individuality, and identity. For many altering their product use patterns to potentially less risky choices pits health against identity. Health

ABOUT THE AUTHOR

Dede K. Teteh served as the project coordinator for the Cost of Beauty-Hair Health Research project with the Healthy Heritage Movement. Her diverse background in public health provided a unique perspective as a facilitator and interviewer for the project. As an African immigrant from Togo, West Africa and researcher, she could communicate effectively with both the community and academic partners on varying stages of the project. She was also successful in recruiting participants from various ethnic and cultural backgrounds. The findings of the project, increased her understanding of the cultural importance of hair and the potential harmful effects of hair product ingredients to Black women’s health. Ms. Teteh’s educational background includes a Bachelor of Science degree in Biology/Theology, and Master & Doctor of Public Health degrees in Health Education.

PUBLIC INTEREST STATEMENT

Black women are now getting breast cancer (BC) at similar rates as White women but continue to die at higher rates and have poorer treatment outcomes. They also use hair products more and some of these products contain chemicals linked to BC risk. Black women (researchers and community), worked together to address community concerns around these potential risks. Results from interviews and focus groups with 91 women indicate that women’s concerns about this topic varied but that for all, hair was culturally important. Because of this, women wrestled with the idea of not using potentially harmful products, as hair was seen as aligned with beauty and identity. Given these potential risk, Black women should review the ingredients of the products they use and become more familiar with potential hazards they hold. Policies about products that have been deemed harmful should regulate their production.
education interventions to minimize harmful hair product usage must acknowledge and incorporate cultural normative beliefs of hair for Black women.

**Subjects:** Cultural Studies; Gender; Heritage; Popular Culture; Race & Ethnicity; Black Studies

**Keywords:** Black women; breast cancer risk; hair product; health; hair and health; community concerns; culture

1. Introduction
Breast cancer (BC) is the second leading cause of death in women in the United States; 1 in 36 women will die from the disease (American Cancer Society, 2011). It affects all women regardless of their race or ethnicity (Centers for Disease Control & Prevention, 2015a). In 2012 alone, 224,147 women were diagnosed and 41,150 died in the United States (Centers for Disease Control & Prevention, 2015b). Since 1989, overall BC mortality rates have decreased in women younger than 50 years of age (American Cancer Society, 2016b), but Black women continue to die at higher rates (American Cancer Society, 2011; DeSantis et al., 2016), often presenting with treatment resistance. Black women are also more likely to be diagnosed at a more advanced stage than are White women (American Cancer Society, 2011). Moreover, while in the past incidence rates were higher in White women, they have recently converged, with Black women now presenting with higher rates (American Cancer Society, 2016a). Proposed causes for these disparities are multifaceted and interdependent on various factors, such as socioeconomic status (Newman et al., 2006), education (Herndon, Kornblith, Holland, & Paskett, 2013), obesity (Bandera et al.; Stephenson and Rose), and environmental risks (Darbre, 2006). Recent studies are beginning to link chemical components in hair and personal care products to breast cancer risk (Stiel, Adkins-Jackson, Clark, Mitchell, & Montgomery, 2016). It is important to note in this context that Black women also use more hair products overall (Mintel, 2015) and more products containing hormonally active chemicals than women of other race/ethnicities (Stiel et al., 2016).

One type of environmental exposure found in beauty products is that of endocrine-disrupting chemicals (EDCs), which may affect the endocrine system functions of human growth, development, and reproduction. Data indicate that EDCs mimic the effects of estrogen and thus may contribute to BC risk (Chen, 2008; Morgan, Gladson, & Rau, 1998). While there are many types of EDCs, three kinds that are often found in hair products are estrogens, phthalates, and parabens. Parabens have been found in human breast tumors (Darbre et al., 2004) and urinary concentration of phthalates has been associated with breast cancer risk (López-Carrillo et al., 2010).

Estrogen is used in hair products to promote hair growth (Yoon et al., 2014). The possible mechanism associated with breast cancer risk includes “modification of mammary gland development, cell proliferation and epigenetic changes leading to tumorigenesis predisposition” (Stiel et al., 2016). Phthalates go mostly unidentified as they are labeled as “fragrances” in hair products. They too can modify mammary gland development, as they “promote cell growth and increase migratory and invasive properties in breast cancer cells” (Stiel et al., 2016). Parabens are used as preservatives in hair products and may induce growth of the breast and also “increase migratory and invasive properties of breast cancer cells” (Stiel et al., 2016).

While research has not yet fully verified these risks, many, including community advocates from this project, are increasingly arguing that a discussion needs to begin about this risk potential, as waiting for definite proof could be considered unethical. In this context, research has to take into account the cultural and historical significance of hair for Black women. In simple terms, hair is a threadlike material that grows from the epidermis or scalp of a person (Merriam-Webster, 2015). However, hair for Black women has been and continues to be politicized (Desmond-Harris, 2009). For example, the crown of glory denotation of hair for African-American women is suggestive of cultural traditions of Africa. Hair was used as a communication and language tool. The traditional African
cultures of the Mende, Mandingo, and Yoruba tribes used hairstyles to send messages (Byrd and Tharps). For people of African descent, the tradition of sculpting and molding their hair to share pertinent beliefs of the pulse of the present day remains relevant.

For many Black women, in the centuries after slavery, alteration of their natural hair textures was influenced by oppression and assimilation into the Eurocentric ideals of beauty (Johnson & Bankhead, 2013; Thompson, 2009). Lighter skin and straight hair represented the aspired presentation of beauty and social status, and thus, Black women took the necessary steps to assimilate into White culture. Hair care management systems began to surface during the nineteenth Century (Rooks, 1996). Indeed, some of the methods used to sculpt and mold hair for Blacks after slavery in the United States were made possible by two Black hair care industry pioneers in the 1800s. Madame C.J. Walker and Anna Malone developed hair-straightening systems to meet societal demands for Blacks to conform to the standard of beauty of the time (Byrd & Tharps, 2014; Dash, 2006).

The impact of the civil rights era in the 1960s and 70s brought a new sense of Black pride and with it various hairstyles devoid of straightening products (Erasmus, 1997; Thompson, 2009). Black hair worn in its natural coiled state was applauded and widely accepted. The Afro represented a symbol of beauty, political change, freedom, intelligence, and love of self (Dash, 2006). Johnson and Bankhead stated the Afro was “essentially illustrative of the freeing of the Black mind and those without an Afro were frowned upon” (89). It is undeniable that hair for many women of African descent is inseparable from their identity (Johnson & Bankhead, 2013; Tate, 2007). In a study conducted by Chapman, participants recalled emphasis from their mothers and grandmothers that their hair was their “crown and glory” (67). These messages overstated the importance of keeping hair maintained and were viewed as a culturally acceptable extension of a woman’s identity.

While hair styles over time have aligned with political movements, to some degree, seeking to have straight hair has been a constant form of assimilation. Indeed, presently Black women spend more money on their hair than any other ethnic group in the United States (Johnson & Bankhead, 2013). The Black hair care industry is valued at a half a trillion dollars with revenues in 2012 exceeding $185 million dollars (Johnson & Bankhead, 2013). Moreover, according to a market research firm, hair care products increased 26.8% in 2013 and were projected to reach $956 million in 2015 (Mintel, 2015). Compared to non-Black consumers in the United States, Black people contributed approximately 51% to the revenue profits of styling products that year.

Clearly hair and hair products are critically valued in Black society. In this context, the question arises if the products used to construct “the perfect” image of beauty for Black women might not only be financially burdensome but actually a culprit in the increasing BC health disparities. Responding to community women’s concerns about the potential role of hair products on BC risk for Black women, we used a community-based participatory research (CBPR) approach to explore this complex issue of hair, culture, and health.

2. Methods
This article is based on key informant and focus group interviews with 91 women from the Inland Valleys of Southern California, collected in 2014 and 2015. We used CBPR methods whereby two local health advocacy agencies collaborated with an academic partner. Respondents were recruited through convenience and snowball sampling using triangulation criteria (younger/older women with and without breast cancer, from various SES backgrounds, stylists, and salon owners) to assure multiple relevant perspectives. The interviews used a semi-structured format, were conducted by trained female Black community volunteers, and took between 60 and 90 min to complete. Once consent was obtained, a brief demographic questionnaire was followed by one-on-one interviews and group discussions about hair, health, and breast cancer. Interviews were audio-taped and transcribed verbatim.
Data analysis included the development of a codebook co-developed by academic researchers and community representatives. Throughout, Grounded Theory methods of emerging coding (Strauss & Corbin, 1997) were used and facilitated by QDA-Miner (Provalis Research, n.d.). To assure data validity, we used constant comparison methods to confirm emerging themes, and for member checking, conducted validation focus groups. The Institutional Review Board application was constructed in collaboration with community and researchers. Research protocols were constructed with community and researchers improved, reviewed, and approved for active consent by a local Institutional Review Board.

3. Results

3.1. Participants

Descriptive information about the 91 women who participated in the study from the Inland Valleys of Southern California is presented in Table 1. Most participants self-identified as African-American (93%), and ages ranged from under 29 to 89 years old. The majority of the respondents were college educated and 17% had a history of breast cancer. When asked, “Who does your hair?” 36% of participants reported they frequented salons regularly and hair was done by stylist/hairdresser. Eighty-three percent of the women used a perm/relaxer. The age of first perm/relaxer was 7% for ages 0–5, 21% for ages 6–11, and 29% for ages 12–17.

Three main themes emerged, summarized in Table 2, included: the meaning and critical role of hair for Black women, the relevance of this research project to the community, and the notion that ‘everything’ causes cancer—so why change.

Theme 1: Perceptions about the meaning and critical role of hair for Black women

Hair remains important to Black women’s identity and for many continues to be “everything...and a big deal!” for daily living. The word “important” was the most commonly used response to the question about the relevance of hair to Black women. Hair was not only an important accessory but seen as a sign of one’s health status irrespective of the respondent ever having BC.

I think it is very important to have healthy hair, I think your hair is a reflection of your health, the health of your body and well-being. (Woman without breast cancer history)

For some women, hair was inseparably aligned with health and how they are seen, imparting strong pressures to be presentable at all times.

It [hair] has to do with everything; it has a lot to do with your health. I mean unfortunately its very important, its almost scary how important it is, cause a lot of woman won’t just go somewhere in a pony tail. It’s scary how important it is. (Hair Stylist)

Due to the lack of hair products available to Black women in the past, many reported that from an early age they and their friends created their own products.

Hair was a big deal, it’s always been a big deal and it was a big deal when they didn’t offer African American products so you did what you had to do, word of mouth you created, and in high school we talked about it, what you can do with it. (Woman with history of breast cancer)

Most women agreed that hair carries high personal significance; however, they also attributed a collective and societal importance to hair and hairstyles.

And that has a lot to do with how we take things we encounter as women of color; how we look because we’ve been raised up as women of color that hair is really important, image is really important. (Woman with breast cancer history)
Table 1. Demographic characteristics of women participants who shared their perspectives on hair, hair products, and health (N = 91)

| Characteristic                      | n(%)       |
|-------------------------------------|------------|
| **Racial affiliation**              |            |
| African-American                    | 85(93)     |
| African                             | 2(2)       |
| Caribbean                           | 2(2)       |
| Multiracial                         | 2(2)       |
| **Education level**                 |            |
| High school diploma                 | 7(8)       |
| Some college                        | 27(30)     |
| College degree                      | 25(28)     |
| Graduate degree                     | 18(20)     |
| Professional certification          | 14(16)     |
| **Age**                             |            |
| 29 and below                        | 20(22)     |
| 30–39                               | 10(11)     |
| 40–49                               | 12(13)     |
| 50–59                               | 16(18)     |
| ≥60                                 | 33(36)     |
| **Household income**                |            |
| Less than $25,000                   | 26(29)     |
| $26,000–$50,000                     | 26(29)     |
| $51,000–$75,000                     | 20(22)     |
| >$75,000                            | 16(1)      |
| **History of breast cancer**        |            |
| Yes                                 | 15(17)     |
| No                                  | 71(78)     |
| **Family history of breast cancer** |            |
| Yes                                 | 30(33)     |
| No                                  | 57(63)     |
| **Who does your hair?**             |            |
| Me all of the time                  | 29(32)     |
| Me some of the time & salon attendance | 19(21)  |
| Stylist/Hairdresser                 | 36(40)     |
| **Ever had a perm/relaxer?**        |            |
| Yes                                 | 83(91)     |
| No                                  | 2(2)       |
| **Age at first perm, y**            |            |
| 0–5                                 | 6(7)       |
| 6–11                                | 19(21)     |
| 12–17                               | 26(29)     |
| >17                                 | 27(30)     |
Several women also cited Black culture as to why hair is important, referring to their childhood and to how their mothers and extended family taught them to view hair either directly or indirectly through unstated expectations of ‘acceptability’. Hair and the image it portrays to the world represents an ingrained philosophy that has not lost its influence to this day.

This cultural understanding was also reflected in the financial obligations of keeping one’s hair in a particular style. Women with or without the financial means went to great lengths to achieve the level of status (or sustain it), accompanied with a particular hairstyle in their community. Many stylists reflected on women having amenities suspended if it influenced how they wore their hair. Spending a few hundred dollars a month to style your hair a certain way was the “proper” thing to do.

I think it has a status, I think [for] a lot of the younger but a lot of the older women too. It’s a really big status thing if your hair is not done a certain way or a certain length and you don’t spend a few hundred dollars or its not proper... (Woman without breast cancer history)

Steps were taken to avoid judgment from other women and community members who revered hair as a representation of the Black community.

I think hair in general in Black culture it’s important for certain people. They’re walking down the street if your hair isn’t done or (in) a decent style, people tend to judge, so I feel like hair in the Black community is important. (Woman without breast cancer history)

| Theme 1: Perceptions about the meaning and critical role of hair for Black women | Hair is critically important to Black women’s identity and for many continues to be “everything ... and a big deal” for daily living. Hair was also seen as a sign of one’s health status irrespective of the respondent ever having BC | “Hair was a big deal, it’s always been a big deal and it was a big deal when they didn’t offer African American products so you did what you had to do, word of mouth you created, and in high school we talked about it, what you can do with it”. (Woman with history of breast cancer) |
|---|---|---|
| Theme 2: The relevance of the project to the community—Welcoming the discussion | The exploration of hair care products as a potential risk to women was applauded by many of the respondents. Women who worked as stylists discussed the potential connection more in depth, offered knowledge and examples from their work | “No, but I do think we need more awareness on that because if there is something that I am doing that’s causing that then I would like to know but not just for myself but for the community for people, women of not color I mean not of one color but of color because something is happening. ...” (Hair Stylist) |
| Theme 3: Everything causes cancer—So why change | Some women, especially younger women, believed “everything can cause cancer” while others were appreciative of the information. For most, health was not the primary consideration in choosing to use hair products because the products were associated with the feeling of acceptance, beauty, and identity | “I know stuff is bad for you but like you said is it just bad for you or are you inviting cancer, so those two things I weigh out. So I think I have a heightened consciousness about it. But we live on earth and there are all kinds of things that will kill us on earth anyway”. (Young woman without BC history) |

“Something with hair products, if you’re using things that make you feel good about yourself and glamorous then I think it’ll be difficult unless you had an alternative”. (Woman without breast cancer history)

Table 2. Three prevailing themes and supporting quotes

| Theme | Key points | Quote(s) |
|---|---|---|
| Theme 1: Perceptions about the meaning and critical role of hair for Black women | Hair is critically important to Black women’s identity and for many continues to be “everything ... and a big deal” for daily living. Hair was also seen as a sign of one’s health status irrespective of the respondent ever having BC | “Hair was a big deal, it’s always been a big deal and it was a big deal when they didn’t offer African American products so you did what you had to do, word of mouth you created, and in high school we talked about it, what you can do with it”. (Woman with history of breast cancer) |
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“Something with hair products, if you’re using things that make you feel good about yourself and glamorous then I think it’ll be difficult unless you had an alternative”. (Woman without breast cancer history)
For women who had a history of breast cancer these sentiments about their hair did not change with the advent of the disease—if anything it made its impact worse. One of the hardest things about being ill for any woman was to accept her hair loss after treatment. As a result, many wore hairpieces to retain their identity through their hair.

It’s important to me, I do wear hairpieces because my hair is thinned out, I was a cancer survivor and I with all the treatments that I had, it took the hair out ... (Woman with history of breast cancer)

Losing their hair minimized their sense of self-worth and identity. The thinning of the hair during cancer treatment still brought out the emotional bond women have with their hair as described by stylists.

I was taught hair is emotion. (Hair stylist)

I think it’s [hair] beauty. I think that defines who you are. (Woman without breast cancer history)

There was the sense of pride that comes with one’s hair that has been instilled in Black women since childhood.

I think being typically Black, somehow going back to our childhood and everything we went through with our hair, we learned a certain sense of pride with yourself and our hair; so they kind of go hand in hand in my opinion. (Woman without breast cancer history)

These associations between hair and identity implied the critical importance of hair for Black women.

It also means hair comes first; everything else can wait, its primary. (Hair Stylist)

Women with a history of breast cancer continue to experience the psychological loss of their hair. During our interviews, many arrived at a place of such frustration and loss, to voice [an angry utterance of] ‘not caring’ about their hair when their demeanor [and sometimes tears] showed that they truly did. Old age was used to explain their newfound relationship with their hair but a deep-rooted grief was noted when they could no longer express themselves through their hair. It felt like they gave up and tried to make their peace with a profound loss.

I think probably because I am older, it’s just not that serious for me anymore but I’ve been there, but now I just care about the convenience. (Woman with history of breast cancer)

Some young women who had not experienced a BC diagnosis shared their disconnect from the expectation of hair as a critical accessory but at the same time reported that they continued to wear different styles that changed their appearance which influenced how society interpreted who they were. The conscious effort and pride shared when defining their identity through the various hair-styles emphasized the importance of hair even for those women who supposedly “didn’t care” about their hair.

I don’t think it [hair] defines you, at least not for me that’s not why I do it. Because I’ve always had like different hairstyles all my life I don’t like having the same thing, I usually have the same color but I like to change hair a lot... (Young woman without breast cancer history)

It is for this reason, that the women were notably frustrated when the manageability of hair resulted for some in the not so joyous decision to cutting their hair close cropped once a year.
I don’t care, I really don’t care about hair to the point where I cut it off once a year, and right now I’m at that stupid stage, and it’s really bunchy and you wash it and blow dry it and it’s like this and by the time it’s done it’s like this. (Woman without breast cancer history)

Though some women voiced nonchalant views of the importance of their hair, their choice of wording as well as their emotionality when it came to this issue showed that they continue to be frustrated when it comes to their hair looking neat and presentable for accomplishing daily tasks. Even when women officially decided that they “just did not care enough”, hair still had some level of significance as most noted they “would not walk around in a ponytail or with their hair in disarray”.

Speaking from my perspective I don’t think it’s [hair] that important. The other people my age might have a different perception of hair. Individuals that I deal with, like my closest friends, we do whatever is comfortable. A lot of times we are in school or working, some of us have families so it just needs to look neat, a presentable attire, etc., just keep going with what you need to do for that day. (Young woman without breast cancer history)

The emotional torment of one woman’s journey filled her eyes with tears of sorrow at the thought that her hair may have been the reason she was not in a romantic relationship. As beautiful as the members of her group told her she was, reassuring her of her glowing image, her self-image was tarnished by her lack of confidence in her thinning hair due to alopecia. Regardless of whether the women were young, old, breast cancer survivors or not, hair mattered. The internal and external expectation about the appropriateness of hair being kept in a particular manner reflected the women’s identity within the culture of the Black community.

I think it [hair] matters at all times. You should, it should be well kept at all times. (Woman without breast cancer history)

Theme 2: The relevance of the project to the community—Welcoming the discussion

The exploration of hair care products as a potential risk to women was applauded by many of the respondents.

... I do feel that just talking about it makes you kind of say ummm ... start thinking. So that is a good thing. I know a lot of us feel like we don’t have time or whatever but this still is an important subject and by you talking about it to me it’s going to make me focus on looking at some ingredients not only coming here but when I go and purchase it. (Salon owner)

It’s important for us to continue to educate ourselves about these hair products. (Woman with breast cancer history)

Some women expressed that although the final verdict was still “out”, they believed that hair products may cause harm and shared personal accounts of troubling experiences. Most respondents saw relaxers and hair colors as being the most harmful to their health and wanted science to further explore and validate these potential connections.

I know that I happened to put a perm in my hair [for] years but I do know that because I’m taking several medications my hair is really drying and it can be very brittle and I’m pretty sure that if you’re getting perm or you’re getting your hair dye you know that can cause different problems, added problems to your health. (Woman without history of breast cancer)

Participants also expressed the importance of this discussion, not only on an individual level, but for the community, specific to their local community, as they saw it to be somewhat left out of current discussions when it came to Black issues.
I think it’s very well needed, and um I like that it’s here in the Inland Empire. Because so many times, since we’re such a very small percentage of the population, I think the LA area and down south and the east coast where there’s a larger... even in the Detroit area where there’s a larger concentration of people of African descent, studies like that go to those areas first. And we never hear anything about it, ever, and we’re like kinda the last on the totem pole to participate in anything like this, so I think this is really great for this area.

(Woman without breast cancer history)

Some stylists wanted to know if the information on the harmful ingredients in hair products were verified, and spoke about the importance of sharing this information with their communities as they did not want to inadvertently negatively affect the health of their clients.

No, but I do think we need more awareness on that because if there is something that I am doing that’s causing that then I would like to know but not just for myself but for the community for people, women of not color I mean not of one color but of color because something is happening something is happening. ... We did not have that back generations ago so something is happening. (Hair Stylist)

The idea of products potentially being harmful was not a new idea to most of the women. Women who worked as stylists, especially discussed the potential connection more in depth, offering knowledge and examples from their work. The chemicals in many of the products used by stylists, even those denoted to be natural, had harmful chemicals that impacted the health of the women (and stylists) who used the products.

There is definitely a lot of chemicals that are in the products that contribute to the breakdown of the cells, because [delete] that stuff they used to use shellac, a hair spray a kind of lacquer to make it hard. Our skin absorbs it and gets into our bloodstream, and I do believe that it contributes to our health a lot. Even natural oils like coconut oil have chemicals in them, just about everything has chemicals in them, it could be hazardous to our bodies, but basically all we can do is the patch test, but any change to the hair could be hazardous, but that’s not to say it could be the lipstick the polish, etc. A lot of product has formaldehyde in it. Even ice cream has formaldehyde in it and that’s why the ice cream you buy from the store is hard, you know. So your ingredients know you know people are more aware because people want to know, because if I’m putting it in my body I want to know. (Hair Stylist)

Not all of the women could pinpoint specific products that could be harmful. They expressed great interest in the topic and wanted to learn more. The women seemed open to changing their routines and expressed interest in using alternative products as long as they would “work” well, if not better than the products they were currently using.

I use a conditioner and a moisturizer on my scalp but if someone told me that there were products that I used in the past or tempted to use today [that are not good for your health], no I would not use them. I changed a lot of things I won’t use anymore that I suspect have a lot to do with cancer. So definitely the hair products are high on my list. (Woman without breast cancer history)

Theme 3: “Everything” causes cancer—so why change

Some women, especially the younger women, met the topic of the relationship between hair product use and breast cancer with strong resistance and irritation and offered alternative possibilities for health risks. Others had never thought about the connection before.

I never thought about hair products being linked. (Young Woman without BC history)

I never expect breast (cancer) ..., I would think brain (cancer). (Young Woman without BC history)
Several young women believed that there were multiple causes to cancer and in frustration (as it seemed to be too close for comfort) said that in fact it seems that “everything can cause cancer” (suggesting it was inevitable and thus, why worry). Some who were aware of the risks associated with certain products, stopped for a season but then considered using the products again because the alternative products in their experience simply were not adequate and they needed them to “work”. The pressure to want to look a certain way simply was too strong.

I think it’s the way you are, there was a time where everyone was like stop putting perm in your hair and I kept it moving but once I was more educated I stopped, but am I tempted to go back to it? Yes. So it’s kind of like you know it’s bad even with the foods we eat but we do it anyways, because I can’t afford all the healthy stuff, that’s the way I see it. (Young woman without BC history)

While many of the young women noted that they were weighing the risks, at the same time they mostly concluded that they would continue using some types of products, regardless of what information is available. Money seems to also be a contributing factor, as “natural” products tend to be more expensive.

Maybe when I make six figures I’ll grow my own garden of natural products. (Young woman without BC history)

The hair stylists were especially aware of the harmful effects of hair products on health. They shared stories from older stylists’ deaths as a result of their profession. Hair products were described as poison and many noted that it impaired their breathing due to the chemical caustic ingredients of the products. Despite this personal knowledge, none of the stylists considered suspending their vocations or advising their clients to consider these risks, with the exception of conducting patch tests on their client’s hair in order to avoid larger scale chemical reactions and potential severe reactions.

My mom told me that hair color back in the day use to kill stylist because it was made out of tar, asphalt tar, maybe it’s the color itself was made of tar and so you mix the two of the combination together. They use to call it ‘the poison’ and a lot of stylists had problems and would die. They are in the salon every day doing it to different clients so that’s why. You know breathing in those chemicals every day and doing it to different people. A lot of nail techs wear the mask because they know they are breathing the fumes every day and their body can react to that and start coming out with rashes and cancer and fibroids so it’s very important to do the tests. (Hair Stylist)

In general, our participants did not believe that people would stop using certain products that are known to work well. Participants suggested that health education for the promotion of good nutrition, physical activity, and other factors that are associated with reducing the risk of poor health and cancer is enough. In their minds, our project was adding hair products to that list of possibilities of risk and negatively impacting their lives, especially as these were the same hair products that were used to portray images of beauty, pride, status, and acceptance in their communities. Many felt threatened by the insinuation that the hair products they used had the potential to kill them. The emotional attachment to their hair instigated a knee jerk reaction when the risk of hair products was discussed. For one young woman when asked “If you found out certain ingredients in hair products were harmful to your health, would you stop using them?” her response was,

Nope. Everything causes cancer nowadays and I personally don’t think that we have gotten far enough in science advances to pinpoint exact causes. Microwaves cause cancer. The sun causes cancer yet most people interact with both on a daily basis and don’t have cancer. So I would need to see a lot of studies that make the correlation and remember correlation does not mean causation. (Young Woman without BC history)
Other women were appreciative of the information, mentally adding hair products to the list of things to consider avoiding as these might add to their cancer risk, but were not quite ready to stop using the products. Yet many in the end felt that at some point they simply had to make a decision to live and not worry too much.

I know stuff is bad for you but like you said is it just bad for you or are you inviting cancer, so those two things I weigh out. So I think I have a heightened consciousness about it. But we live on earth and there are all kinds of things that will kill us on earth anyway. (Young woman without BC history)

In most of these women’s reality, health was not the primary consideration in choosing to use hair products. Hair products were associated with the feeling of acceptance, beauty, and identity. Therefore, unless alternative products were able to produce the same results, the women and stylists were not going to stop using hair products containing harmful ingredients.

I couldn’t say because I think that sometimes if using a particular product causes you to look a certain way and you want to look that way, its like with food, if you know this is good you love eating its kind of hard to just cut off. Something with hair products, if you’re using things that make you feel good about yourself and glamorous then I think it’ll be difficult unless you had an alternative. (Woman without breast cancer history)

Furthermore, as shown in Table 3, the results of ingredient analyses of hair products in six salons in the Inland Empire provided context on harmful products used frequently by stylists. For each hair products, using the Environmental Working Group’s Skindeep®’s (2014) database, an overall hazard rating between 1 and 10 was assigned to the ingredients (low hazard from 0 to 2, moderate hazard from 3 to 6, and high hazard from 7 to 10). Fourteen ingredients received an overall hazard rating between 7 and 10 found in shampoo, conditioner, hair color/dye products, and hair relaxers/perms. The harmful effects of these ingredients include: increased cancer risk, endocrine disruption, organ, reproductive, and immune system toxicant.

Table 3. High Overall Hazardous Rating (OHR) and effects of ingredients found in hair products frequently used by hair stylists from six salons in the Inland Empire

| OHR | Cancer affects genes or cells | Endocrine disruption | Skin, eyes, lungs toxicant/allergen | Organ system toxicant | Reproductive system toxicant | Immune system toxicant |
|-----|-------------------------------|----------------------|-----------------------------------|-----------------------|-----------------------------|------------------------|
| Propylparaben | 10 | X | X | | | |
| Fragrance | 8 | | X | | | X |
| Resorcinol | 8 | | ? | | | X |
| Benzyl Salicylate | 7 | | X | | | |
| Butylparaben | 7 | X | X | | X | |
| Cocamide DEA | 7 | | X | X | | |
| Courain | 7 | | | | | X |
| DMDM hydantoin | 7 | X | | | | X |
| Geraniol | 7 | | | | | X |
| Isobutylparaben | 7 | X | X | | | X |
| Lilial | 7 | X | | | | |
| p-aminophenol | 7 | X | | | | |
| Toluene-2,5-diamine | 7 | X | | X | | |
| Toluene-2,5-diamine sulfate | 7 | X | | X | | |


4. Discussion

People of African descent in the United States have fought to retain their identity in a world that is often critical of their presence. Historically, hair was an avenue for self-expression and represented views of liberation that assisted African-Americans in identifying with their lost African heritage. Thus, hair has been and remains a highly politicized topic for the Black community (Desmond-Harris, 2009), even if it means that hair is being kept according to European beauty standards. Black women from childhood have been conditioned to revere their hair as an extension of their identity and self-worth. For instance, they have been taught it is not proper to wear their hair in a ponytail because the message being projected to the world would not represent their true value.

As a result of this social norm conditioning, Black women financially invest in their hair significantly. For this community, more than half of the respondents reported an income of $50,000 or less, but spending a few hundred dollars a month on their hair was the norm. They felt a strong expectation to take the necessary steps to achieve the hairstyle that projected status and pride in their blackness.

It was no surprise that with this sense of ingrained importance and meaning of hair they felt threatened by the suggestion that hair products caused adverse consequences to their health. Even when Black women of past did not have access to hair products they creatively used any product that seemed to work to achieve a particular look that would be accepted by society. This has not changed. Regardless of education (even for those with a college degree) many feel that the products made them who they are, increasing their self-esteem and ensuring their acceptance as a Black person (both within the Black community as well as for their interaction with the majority culture).

Our respondents were culturally and age diverse with 93% self-identifying as African-American. They shared that the importance of hair for them far exceeded the potential health consequences from the hair products they regularly used. Stylists were familiar with the health issues of using harmful products but continued to work and use them on their customers for whom they deeply care—many having long-lasting relationships with their clients. Among the 40% of the participants who went to a hairstylist, most were not aware of the types of ingredients that were being used on their hair. They trust their stylists implicitly. At the same time, the stylists had heard of stories of co-workers dying from the harmful chemicals in hair products but their pressing financial responsibilities and the need for hair to “come out right”, appeared to outweigh potential ill health.

In addition, it is alarming that though 17% of women reported a history of breast cancer or had family members with a history of breast cancer, nearly all of them had used (and many are continuing to use) a relaxer or a perm. This is a product described, even by stylists, as so harmful that a patch test should be conducted before full application on a client’s hair.

The motivation to continue using products remained even among Black women with a history of breast cancer as well as with younger women who were combative when the conversation turned to the products potentially causing harm. That their hair products achieved a certain style appeared to be far more important than the potential health consequences that may follow. Participants expressed that alternative products that may be or may not be healthier are far too expensive and do not work the same. When asked if these products are more important than their health, most responded yes. Their hair, and hair products, assisted them in feeling a sense of acceptance and belonging in a society that often shuns their community.

This is not to say that health was not important to this population, but they made it clear that removing hair products that provided a sense of worth would be an ineffective intervention strategy if done in isolation. Hair is important to Black women. Indeed, all participants believed their hair to be important even in instances in which frustrations of management and lack of financial resources depicted hair as insignificant.
In the context of Black women representing the group that experiences the greatest risk of breast cancer death for all races, our project explored a culturally complex issue. For our participants, the fact that something as critical to them as the hair products they regularly use to maintain their sense of “self”, may impart additional risk for breast cancer, is deeply troubling and in most cases resulted in highly emotional responses. It is clear that for any of these potential risks being ‘heard’, we need to acknowledge that most, if not all of our women’s identities are tied to their hair. The hair products used to construct a particular style represent strong emotional ties to their community as well as self-acceptance. Alternative products thus will have to be affordable and when used, achieve the same hair style as the potentially harmful products. With Black health disparities a well-known fact, the concern is to not unnecessarily alert and add further stress to the community, but to be proactive if concern is truly warranted. This is why all our respondents wanted to have better information and more research about this possible link. In the meantime, just in case, they welcomed a carefully conducted discussion about this in their broader community as this issue clearly challenges them on many levels forcing them to weigh their health with their emotional wellbeing.

5. Cultural relevance of findings/conclusion

Comedian Chris Rock, alluded to the harmful effects of hair product ingredients to the health of women in his documentary Good Hair. Many critics however commented on the lack of context and authenticity of the film for Black women (Puente, 2009). As one critic stated, “there isn’t a Black woman I know who sits down in a stylist’s chair to get a relaxer because she as Rock posits, wants to look white” (Wheat, 2009). Many including Wheat, felt Rock missed the mark when it came to the cultural importance of hair, community, and identity for Black women.

Clearly this is a very sensitive discussion, which was validated by our paper; as we’ve allowed Black women to have a voice in a discussion about them. Hair goes beyond Black women wanting to look White. Black women seat in a stylist chair, because (a) they want to feel beautiful and having that hairstyle may give them that sense of self-worth in a society that does not value their worth (b) their hair is an extension of their identity and (c) portrays a narration of their past, present, and future which Black women wear proudly no matter the length or texture, whether they purchased three bundles of Indian remi-or Peruvian for a sew-in or parade their natural hair.

The importance of hair for Black women culturally may defy logic for some White women who all their lives have been told they were beautiful because their hair laid flat and straight. For Black women and other women of color, acceptance of who you are despite societal pressures to conform to a White ideal of beauty has historically been a struggle and continues to be one, as discussed by our participants. The complex context and cultural significance of hair to Black women is undeniable and complicates an open discussion about the potential risk inherent in the use of products related to achieving whatever look a Black woman chooses.

While Rock missed the mark in some respects, he has been credited for beginning an important discussion. This paper not only addresses some of the concerns brought forth by critics of the film, but provides additional perspectives from Black women of various cultural experiences. For example, this paper is rooted in an open dialog between Black women and Black women researchers around the cultural importance of hair, identity, and health. As indicated by our results, not only was discourse about the issue accepted by the Black community, the discussion was encouraged as many (men and women) felt the tensions the dilemma of potentially harmful side effects of pursuing Black beauty involved.

For instance, local artist, Maurice Howard of Riverside, California, provided his image Cliva as one of the symbols for this project (see Figure 1). The image of a Black woman with a beautifully coifed afro spoke to the importance of beauty, strength, and identify of Black women to their hair. Serenity by Viveca Mays of Moreno Valley, California, was another image by a local artist that portrayed another beautiful Black woman, this time with platted hair (see Figure 1). Both images are far from society’s image of beauty yet with each presentation of our findings of this project, these images
caught the eyes of the audience before any words were spoken. It speaks to the power of the arts to portray the importance of hair for Black women and amplified the importance of this discussion for our participants—Black women and their communities.

As this complex and sensitive discussion continues, Black women’s choice of a potentially harmful product used to make them beautiful, powerful and valued should be respected and not demonized. On the other hand, Black women should at the same time be cautious of the beauty and personal care products they use on a daily basis (Robinson-Flint, 2017). As another important part of valuing themselves, Black women should read the ingredients of products and become more familiar with potential hazards to their health as they search and lobby for products that allow them to maintain their chosen image and keep them safe from harm. None should have to make a choice between identity and health. As the single largest consumer of hair products, Black consumers should lobby for more clarity about risk, and, if products are deemed harmful should, use their voices to regulate production of these products. Hair is not simply an accessory but an extension of the Black women’s identity. As we become more aware of the health consequences of the hair products used to transform our *Crown and Glories*, Black women can seize the opportunity to become active and empowered in reducing their risk of breast cancer.
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