Plastic Surgery and Music: Examining Plastic Surgery References in Hit Songs

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Summary: The purpose of this study was to assess the frequency by which plastic surgery-related terms have been included in the lyrics of Western music hits from the 1970s to the present day as a proxy for estimating the cultural impact of plastic surgery. A list of the Billboard Year-End Hot 100 songs from 1968 to 2019 and the Billboard Year-End Hot R&B/Hip-Hop songs from 1970 to 2019 was obtained for a combined total of 8550 songs. Lyrics for each song were extracted via a web-scraping system, and a database of plastic surgery-related terms was developed by our team. Each term was then queried amongst the compiled lyrics data sets, and the total frequency of plastic surgery-related terms per year and per decade was determined. Each term was also examined in its context of usage to validate its relevance to plastic surgery and determine its connotation through sentiment analysis. The frequency of plastic surgery-related terms referenced in the Billboard Year-End Hot 100 and Billboard Year-End Hot R&B/Hip-Hop charts has increased 15-fold from the 1970s (n = 1 song) to 2010s (n = 15 songs). The terms most often mentioned included “doctor,” “silicone,” “plastic,” “surgery,” “nip-tuck,” and “lipo.” Artists who most frequently used plastic surgery-related terms were Kanye West, 2 Chainz, and Nicki Minaj. The current study is the first to evaluate trends in plastic surgery references in music formally. In turn, this study helps further our understanding of the interplay between plastic surgery and popular culture.

INTRODUCTION

Multiple studies have confirmed that a growing dialog about plastic surgery exists across many social media platforms, and the American Society of Plastic Surgeons has reported concomitant increases in plastic surgery procedures over the last several years. In addition to social media, music also serves as a conduit for cultural expression that may influence the public perception of plastic surgery and cosmetic procedures. In the present study, we hypothesized that references to plastic surgery procedures in hit songs have mirrored the increase in cosmetic procedures over the past several decades. As such, we generated a list of common plastic surgery-related key terms and queried these words against the lyrics of America’s highest-charting music from the 1970s to the present day.

MATERIALS & METHODS

Creation of Lyrics Database

A list of the Billboard Year-End Hot 100 songs from 1968 to 2019 and the Billboard Year-End Hot R&B/Hip-Hop songs from 1970 to 2019 was obtained. These charts were selected based on Billboard’s well-documented reputation as a consistent, reliable reporter of music popularity among the general public. A total of 8550 songs was obtained, with 5200 and 3350 songs from the Billboard Year-End Hot 100 and Billboard Year-End Hot R&B/Hip-Hop lists, respectively. These songs were maintained independently based on the charts from which they were acquired and grouped by decade. Lyrics for each song were then extracted via a web-scraping system from Genius, a website that compiles annotations, interpretations, and lyrics for a vast collection of songs.

Plastic Surgery-related Terms & Hit Extraction

A list of plastic surgery-related terms that excluded medical jargon was generated by the study team as follows:

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"ass," “butt,” “boob,” “breast,” “nipple,” “tit,” “doctor,” “facelift,” “lipo,” “nose-job,” “plastic,” “silicone,” “surgery,” “surgeon,” and “tuck.” These terms were queried against the lyrics database and counted as hits if they appeared in a song. Repeated terms within the same song were counted as only 1 hit. Songs that returned hits across multiple years, because they remained as acclaimed songs, were assessed such that they counted for a single year in which they were produced. Each hit was then evaluated in context to validate its relevance to plastic surgery.

### Sentiment Analysis

Each term was independently examined by 10 individuals, including the study team and four plastic surgery residents, in context to determine whether it had a positive, negative, or neutral sentiment. Terms that alluded to or

### Table 1. Characteristics of Hit Songs with Plastic Surgery-related Terms

| Artist | Year | Title | Phrase | Sentiment |
|--------|------|-------|--------|-----------|
| Manfred Mann’s Earth Band | 1977 | Blinded by the Light | Some silicone sister with a manager mister told me I got what it takes | ☀ |
| Sir Mix-a-Lot | 1992 | Baby Got Back | I ain’t talkin’ ‘bout Playboy ‘Cause silicone parts are made for toys | ☀ |
| Beck | 1994 | Lover | With the rerun shows and the cocaine nose job | ☀ |
| Next | 1998 | I Still | My material girl in this material world | ☀ |
| Tal Bachman | 1999 | She’s So High | You —, Now I got u ready to flip your nipples | ☀ |
| India.Arie | 2001 | Video | While you pinch your nipples, to feel a little independant I'm glad you did it, hunny, the money's there | ☀ |
| Cash Money Millionaires, Mannie Fresh | 2001 | Project Chick | I bought them shoes, them tattoos, an even fixed yo breasts | ☀ |
| Cam’Ron Featuring Juelz Santana, Freecyk Zekey & Toya Kanye West | 2002 | Hey Ma | They all say I'm rotten and rich | ☀ |
| Sir Mix-a-Lot | 2003 | Through The Wire | Y’know, he had, I had reconstructive surgery on my jaw | ☀ |
| Shm Village Featuring Kanye West & John Legend | 2004 | Selfish | And half my jaw was in the back of my mouth, man | ☀ |
| Kanye West Featuring Jamie Foxx | 2005 | Get It | I looked in the mirror | ☀ |
| Three 6 Mafia | 2008 | Lo-Li Lo-Li (Pop That Body) | I'm really not sure if her breasts are fake | ☀ |
| LL Cool J Featuring The-Dream | 2008 | Baby | Bought my new titty and a bigger ass | ☀ |
| 2 Chainz Featuring Drake, Pitbull | 2012 | No Lie | In Columbia the women got everything done, but | ☀ |
| 2 Chainz Featuring Travis Scott, Nicki Minaj, Drake & Lil Wayne | 2017 | 4 AM | They are some of the most beautiful women I've ever seen | ☀ |
| Chris Brown | 2014 | Loyal | Yeah, my momma she told me don't worry about your size | ☀ |
| Trey Songs | 2014 | Foreign | She walkin' around lookin' like Michael with your money | ☀ |
| Nicki Minaj Featuring Drake, Lil Wayne & Chris Brown | 2015 | Only | With her big round booty with the silicone tits | ☀ |
| LL Cool J Featuring The-Dream | 2008 | Baby | I'm really not sure if her breasts are fake | ☀ |
| 2 Chainz Featuring Drake, Pitbull | 2012 | No Lie | Bought my new titty and a bigger ass | ☀ |
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Table of songs containing hit terms categorized by year. A playlist of these songs can be found on YouTube under the title “Plastic Surgery Hits” (https://www.youtube.com/watch?v=kqg1c1_8HGdw&list=PLIkSIvbmEWwXAIrIanKV2UN9wvKVeWhOo).
described the state of having undergone plastic surgery as “fake” were deemed negative. Terms that described plastic surgery in the setting of reconstruction, fixing a perceived defect, or enhancing a body part were deemed positive. All other plastic surgery-related phrases that did not fall into the aforementioned categories were deemed neutral. Author R.C. then tallied anonymous responses and selected the most frequent response for each individual song lyric as the prevailing sentiment.

RESULTS

Through the initial search, 5200 songs were identified from 1968 to 2019 and 3,350 songs from 1970 to 2019 from the Billboard Year-End Hot 100 and Billboard Year-End Hot R&B/Hip-Hop charts, respectively. Between the 2 charts, 29 unique songs were identified as featuring plastic surgery-related terms within their lyrics (Table 1). When plotting the frequency of hits per decade, there was an increase in the frequency of plastic surgery-related terms with time. In particular, both charts showed a precipitous increase in plastic surgery-related terms from the early 1990s to 2019. (Figs. 1–3). The first plastic surgery-related term that appeared in the charts was the word “silicone” used in the 1977 song, “Blinded by the Light” by Manfred Mann (Table 1). Moreover, Kanye West was identified as the artist who most frequently employed the use of plastic surgery-related terms, with a total of four Billboard-featured songs that included plastic surgery references.

The overall sentiment of plastic surgery-related terms in the 29 songs was positive in 11 songs, negative in 11 songs, and neutral in 7 songs based on sentiment analysis performed on the responses of 10 independent reviewers (Table 1). There was no overall trend in sentiment over time. In terms of gender distribution, 83% (24) of artists identified in this study were men, 10% (3) were women, and 7% (2) were mixed groups with both genders. Of the male artists and groups, 41.6% (10) used plastic surgery-related terms with a positive sentiment. In contrast, 33.3% (1) of the female artists had a positive sentiment. Of the musical groups with multiple genders, 100% had a negative sentiment with their plastic surgery-related terms.

DISCUSSION

In this study, we identified an increase in plastic surgery-related terms used within the Billboard Year-End Hot 100 and Billboard Year-End Hot R&B/Hip-Hop charts from the 1990s onward, with the majority of these terms relating to breast and buttock augmentation. Interestingly, the ASPS National Clearinghouse of Plastic Surgery Procedural Statistics report from 2018 shows a 48% increase in breast augmentation procedures from 2000 to 2018 and a 63% increase in
buttocks augmentation with fat grafting from 2015 to 2018. The trend identified in our study may reflect a culture shift whereby these procedures became more societally acceptable and sought after.

Limitations of this study include its assessment of only the Billboard Year-End Hot 100 and Billboard Year-End Hot R&B/ Hip-Hop charts. Additionally, although our list of terms was designed to capture as many plastic surgery-related references in song lyrics as possible, it is likely that some references were missed based on our queried terms. Finally, although we used contextual clues to rate the sentiment towards the plastic surgery terms in the songs, we cannot ascertain that these perceived sentiments were those intended by the artists.

CONCLUSIONS

To assess the influence of plastic surgery on music, we performed an analysis of 8550 songs from the Billboard Year-End Hot 100 and Billboard Year-End Hot R&B/Hip-Hop charts spanning the last 5 decades. We subsequently identified an overall increase in the frequency of plastic surgery-related terms in both charts. Moving forward, we must recognize the unique position that plastic surgery holds in popular culture and continue to explore how this status will impact patient care and perceptions of the field.

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