

# Minimally Invasive Facial Cosmetic Procedures for the Millennial Aesthetic Patient

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## ABSTRACT

Millennials, defined as the generation of individuals born between 1981 and 1996, have emerged as one of the leading patient demographics seeking minimally invasive cosmetic procedures. Worldwide, millennials are more likely to consider preventative treatments compared to any other age-group. The three most popular minimally invasive facial procedures in this demographic include botulinum toxin, dermal fillers (eg, hyaluronic acid, calcium hydroxylapatite, facial fat-fillers), and microdermabrasion. Given their impact on the expanding aesthetic medicine market and their favorable disposition towards cosmetic procedures, it is necessary for dermatologists and cosmetic providers to understand their motivations and perspectives. While some research studies have elicited the opinions of millennials on social issues, education, and technology, there is a paucity of literature on millennials' impressions, opinions, and perceptions of aesthetic procedures. As a generation that has been reshaping the culture of healthcare delivery and encouraging the innovation of products and procedures with their unique values and perspectives, accounting for their beliefs, and fostering a better understanding of their experiences will promote an elevation in the quality of their care.

*J Drugs Dermatol. 2020;19(1):100-103. doi:10.36849/JDD.2020.4641*

## INTRODUCTION

In aesthetic medicine, millennials have emerged as one of the leading patient demographics seeking minimally invasive cosmetic procedures.<sup>1-3</sup> Millennials, defined as the generation of individuals born between 1981 and 1996, have surpassed baby boomers as the largest living generation in the United States.<sup>4,5</sup> Extending between the ages of 23 and 39, this group is comprised of individuals with varying experiences and priorities; millennials have also been reported to be the most diverse adult generation in American history.<sup>6</sup> With their transition into adulthood, millennials have become crucial, informed decision-makers of their health, shaping the culture of medicine with their unique perspectives and priorities.<sup>7</sup> Given their impact on the expanding aesthetic medicine market and their favorable disposition towards cosmetic procedures, it is necessary for dermatologists and cosmetic providers to understand their motivations and perspectives.

We have conducted a review of the literature pertaining to minimally invasive facial aesthetic procedures in the millennial demographic. While popular media has accumulated abundant information on millennials and the aesthetics industry, scholarly research on millennials and minimally invasive facial cosmetic procedures remains lacking. A PubMed.gov search on August 6, 2019 of the keyword "millennial" produced 878 results. Review of these titles and abstracts revealed zero publications exploring millennials and facial aesthetics preferences; this demonstrates the lack of scholarly literature in this domain.

This review serves as an exploratory effort to begin to fill this gap.

### Understanding Millennials

In order to understand the surge of minimally invasive cosmetic procedures in this population, it is necessary to contextualize the socioeconomic background of this demographic.

A generation raised amidst a technological revolution, millennials stand apart as true digital natives.<sup>8</sup> In particular, social media has emerged as a leading platform for this generation's social and commercial experiences.<sup>9</sup> Millennials reportedly spend over six hours a week on social media, demonstrating it to be an integral component of the millennial lifestyle.<sup>10</sup> Their affinity for the digital world has become a target of advertising efforts; digital marketing and personalized advertising have been utilized as prominent commercial strategies to target millennial consumers.<sup>11,12</sup> Rising to the forefront of the advertising platform is social media, with the emergence of plastic surgeons and other medical doctors as "social media influencers" as well as the use of plastic surgery-related hashtags.<sup>13-15</sup> An example of the utilization of social media in aesthetic medicine is RealSelf, an online marketplace whereby consumers of cosmetic procedures can connect on a social platform to review and rate their experiences, supported by photographs and personal testimonies.<sup>16,17</sup>

In general, millennials are considered economically disadvantaged as the generation encumbered with more student debt and lower incomes than other age-group.<sup>18</sup> Lower earnings coupled with debt have contributed to lower credit supply, ultimately leading this generation to have fewer assets compared to preceding generations.<sup>18,19</sup> With less disposable income, millennials have delayed social commitments like marriage and parenthood, choosing instead to focus on their individual growth through higher education, careers, experiences, and personal fulfillment.<sup>20</sup> Yet, even with relatively less money to spend, millennials have invested in self-care and personal wellness, reportedly outpacing baby boomers 2:1 in the self-care industry.<sup>21</sup> With aesthetic medicine falling in the realm of these self-care services, millennials have become avid consumers of this market, seeking cosmetic procedures to improve the overall quality of their life. Particularly, the volume of minimally invasive cosmetic procedures performed annually has increased tremendously in this demographic.<sup>2,3</sup> These procedures are fiscally advantageous given their capacity to provide notable results at a fraction of the cost of more invasive cosmetic surgeries. Thus, millennials have identified the most cost-effective solution to maintaining youthfulness and delaying the aging process: starting preventative treatment at a young age.<sup>22,23</sup>

### Prejuvenation

Among the latest cosmetic trends in the millennial consumer group is prejuvenation, a portmanteau combining the words prevention and rejuvenation.<sup>24</sup> Prejuvenation refers to the use of minimally invasive procedures to maintain a youthful appearance and ideally delay the onset of visible signs of aging.<sup>22,24</sup> This trend highlights the focus of millennials on early maintenance treatments to produce natural-appearing results in order to avoid or delay more invasive procedures down the line. Injectables, specifically neuromodulators and dermal fillers, are the leading products utilized to achieve these results.<sup>3</sup>

A long-term twin study seeking to evaluate the prevention of wrinkles with neuromodulating agents concluded that long-term onabotulinumtoxinA treatment can effectively prevent facial lines present at rest.<sup>25</sup> This study, although limited by design, suggests that long-term treatment with neuromodulating agents can lead to the prevention of future wrinkles, providing supporting evidence for prejuvenation. An additional study demonstrated similar results with long-term treatment of glabellar rhytids with onabotulinumtoxinA, further supporting the use of neuromodulators for prejuvenation.<sup>24</sup>

Yet, the efficacy of utilizing cosmetic procedures to prevent facial aging is still highly debated given the relative paucity of long-term, compelling research to support the anti-aging effects. Some physicians believe that providers should not pre-treat younger patients prior to any visible signs of aging.<sup>22</sup> Rather, these physicians advocate for skin protection from sun

exposure and preventing skin damage by avoiding smoking.<sup>22</sup> Regardless of the evidence or lack thereof to support prejuvenation as an effective preventative measure of skin aging, it remains a popular trend particular to millennials.

### The Rise of Minimally Invasive Cosmetic Procedures

With the destigmatization of cosmetic procedures, minimally invasive procedures have become incorporated into the aesthetic tool-box of the modern-day millennial. Per Allergan's 360° Aesthetics Report, "82% of millennial consumers believe injectable treatments to be socially acceptable," with a reported 52% having considered dermal fillers and 60% having considered neuromodulating agents.<sup>1</sup> Worldwide, millennials are also more likely to consider preventative treatments compared to any other age-group.<sup>1</sup> The American Society for Dermatologic Surgery's 2017 Procedures survey reports that use of facial injectables has nearly doubled in those under 30 years in the last 6 years.<sup>27</sup> In this demographic, the three most popular minimally invasive facial procedures are botulinum toxin, dermal fillers (eg, hyaluronic acid, calcium hydroxylapatite, facial fat-fillers), and microdermabrasion.<sup>3</sup>

These reported findings reveal a notable trend in young adults seeking to enhance their physical appearance via cosmetic procedures as adjunct tools to accompany non-invasive cosmetic products.<sup>1,3</sup> While botulinum toxin injections and dermal fillers have traditionally been used by older demographics seeking facial rejuvenation, millennials comprise a fast-growing consumer demographic of these products.<sup>28</sup>

There is a lack of scholarly literature exploring the motivation behind this trend; several hypotheses include the influence of social media, celebrities, and selfie-culture promoting a sense of perfectionism.<sup>2</sup> The rise of minimally invasive procedures, particularly injectables, is likely multifactorial in nature. Owing to the affordability of these procedures relative to more invasive plastic surgery, the subtle, yet appreciable results, as well as reasonable recovery times, patients are seeking convenient approaches to achieve their aesthetic goals. Injectables represent a popular option for patients interested in achieving a more youthful appearance but are not ready to commit to more invasive or irreversible options to attain these results.<sup>29</sup>

### Botulinum Toxin

Botulinum toxin injections are the most common nonsurgical cosmetic procedure worldwide.<sup>30</sup> According to the American Society for Aesthetic Plastic Surgery (ASAPS), over 2.5 million injectable procedures were performed in 2018, with 67% of these procedures consisting of botulinum toxin injections.<sup>29,31</sup> Botulinum injections have increased by 36% since 2014, demonstrating a steady uptrend in the popularity of this procedure.<sup>31</sup>

Cosmetic injectables, such as neuromodulators, have become

the leading products utilized to achieve subtle, yet notable improvement in facial aesthetics.<sup>3</sup> Neuromodulating agents have been used cosmetically to reduce the appearance of dynamic rhytids and fine lines.<sup>32-34</sup> By inhibiting muscles from contracting, neuromodulating agents decrease facial movement and in theory may be used preventatively to suspend the development of wrinkles.<sup>32,33</sup>

While neuromodulator injections have been widely used by older generations to achieve a more youthful appearance by treating fine lines and wrinkles, their popularity has been steadily growing in the millennial generation. According to the American Academy of Facial Plastic and Reconstructive Surgery, botulinum toxin injections have increased by 22% among millennials in the past five years; members of this organization have attributed this in part to the rejuvenation trend.<sup>2</sup> Allergan, the maker of Botox<sup>®</sup> Cosmetic, has targeted millennials in its latest advertising campaign; this campaign seeks to emphasize the ability of Botox to produce natural and subtle results in this demographic, promising consumers to “look like you with fewer lines.”<sup>35</sup>

#### Dermal Fillers

Dermal fillers comprise the second most popular minimally invasive procedure in facial aesthetics in the millennial population.<sup>3</sup> Within the dermal fillers category, hyaluronic acid fillers remain the most popular, followed by calcium hydroxylapatite (e.g. Radiesse), and facial fat-fillers.<sup>3</sup> Per the ASAPS's 2018 Procedure Report, hyaluronic acid injections are up 58% since 2014.<sup>31</sup> Of all injectable procedures performed in 2018, 30% consisted of hyaluronic acid injections.<sup>29</sup> Given their lasting effects and lower potential to induce allergic reactions relative to other classes of fillers,<sup>36,37</sup> hyaluronic acid fillers have become the preferred filler by cosmetic providers.

Dermal fillers have been utilized to improve volume distribution and ultimately achieve balanced facial contouring.<sup>34</sup> Similar to neuromodulator injections, the subtle, yet notable results coupled with little to no down-time has made this procedure popular in millennials. The Global Aesthetics Consensus Group has devised consensus recommendations, advocating for an integrative approach to injectables by endorsing combination treatment of neuromodulators and hyaluronic acid fillers.<sup>30</sup> Allergan has also tailored advertisement of Juvéderm, the company's family of hyaluronic acid fillers, to millennial women in the advertisement montage titled “Juvéderm It”; in this montage, a diverse group of women pose as a backdrop to bolded pink messages directed at younger consumers: “Live it, work it, pose it, boss it.”<sup>38</sup>

#### Microdermabrasion

Microdermabrasion, a popular method of superficial skin resurfacing, utilizes microcrystals or diamond tips, as exfoliants to

remove the outermost layer of skin.<sup>39</sup> Microdermabrasion has been studied for its effects on acne, pigmentation disorders, and scarring disorders.<sup>40</sup> This rejuvenating cosmetic treatment has risen in popularity amongst millennials, coming in as the third most popular minimally invasive procedure in facial aesthetics.<sup>3</sup>

Like fillers and neuromodulators, microdermabrasion provides subtle, natural, and rejuvenating results that are appealing to the millennial population. By smoothing and buffing the skin's surface, microdermabrasion brightens the face,<sup>41</sup> producing a natural glow that many patients are seeking. Furthermore, given that it is believed to stimulate dermal collagen and elastic fiber production, microdermabrasion serves as an additional tool utilized in the rejuvenation trend targeting millennials.<sup>40</sup>

### CONCLUSION

The ASAPS reports that Americans spent more than 15 billion dollars on surgical and nonsurgical aesthetic procedures in 2016, with nonsurgical procedures accounting for 44% of this total.<sup>42</sup> Given that millennials command a significant spending influence in the aesthetics sector and represent the leading age-group most likely to consider preventative treatments,<sup>1</sup> it is important to explore and document their motivations and perspectives. While some research studies have elicited the opinions of millennials on social issues, education, and technology, there is a paucity of literature on millennials' impressions, opinions, and perceptions of aesthetic procedures. With millennials serving as a target of several advertising campaigns in the cosmetic dermatology and aesthetic medicine markets, it is worthwhile to produce reliable studies of their experiences with cosmetic procedures. As a generation that has been reshaping the culture of healthcare delivery and encouraging the innovation of products and procedures with their unique values and perspectives, accounting for their beliefs and fostering a better understanding of their experiences will promote an elevation in the quality of their care.

### DISCLOSURES

NM and JKN have no conflicts of interest to disclose. JJ is a scientific consultant for Allergan and Galderma and received a Merz product grant for educational training purposes.

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