

AN EXAMINATION OF HOW SO-YOUNG INTERNATIONAL INC., USES WECHAT TO
PROMOTE COSMETIC SURGERY

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ABSTRACT

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In the Chinese cosmetic surgery marketplace, advertisements are used to promote unrealistic beauty standards. The popularization of a variety of social media platforms has made it possible for such advertisements to proliferate more quickly. Rarely do these messages address potential risks and complications associated with cosmetic surgery. This practice makes it challenging for consumers in general and for adolescents in particular, to examine the range of variables that should be considered before scheduling, often irreversible, cosmetic surgery procedures.

This pilot study examined patterns of covert advertising on So-Young International Inc.'s WeChat posts. Guided by the heuristic-systematic model, social comparison theory and objectification theory, a latent content analysis was conducted and four elements were determined as reoccurring components among the posts. A random sample of 267 articles were then selected from 60 days during the period from 2015 to 2019, to test the present elements in relationship to readers' engagement level. Findings revealed that readers engaged more with posts that featured fewer elements. Additionally, those who followed So-Young's official WeChat account more often clicked "like" or "wow" when there was an entertainment appeal. The results also provide insights regarding how adolescents may be targeted through covert advertisements.

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This thesis is dedicated to my loving grandmother, Lanying Zhang, and my father, Qi Wang.
I won't be who I am today without your full support, endless love and faith in me.
I love you forever!
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CHAPTER ONE: INTRODUCTION

Cosmetic surgery is an elective surgery that most people seek out to enhance their appearance (Sullivan, 2001). The global cosmetic surgery market continues to grow exponentially, with China being the third largest cosmetic surgery market in the world. In China, being attractive is considered an asset; in fact, there is a recognition that “Appearance is power” (Hua, 2013). A number of studies have reported that having an attractive appearance or having a desirable body shape can help individuals: enhance their social status (Yang J. , 2011), gain social recognition (Lindridge & Wang, 2008), and obtain positive outcomes for their future career and relationships (Hua, 2013). Reasons commonly provided for pursuing cosmetic surgery include improving attractiveness, obtaining better job opportunities, and pleasing others. The overwhelming focus on such gains often result in consumers not adequately considering the risks and complications associated with cosmetic surgery procedures.

Cosmetic surgery procedures include a number of potential risks and complications, both physical and psychological, the most extreme being death. Therefore, it is important that potential risks and complications associated with cosmetic surgery be foregrounded, especially when the consumers are adolescents who have not yet developed the cognitive reasoning ability to make cosmetic surgery decisions, many of which are irreversible (Pechmann, Levine, Loughlin, & Leslie, 2005).

A substantial body of research catalogs mass media’s role in promoting ideal beauty standards from a sociocultural perspective, primarily through the traditional media, e.g., exposure to television and magazines (Yan & Bissell, 2014; Vandenbosch & Eggermont, 2012). Specifically, women and girls exposed to mass media content related to appearance, broadly speaking, may experience negative reactions, like comparing themselves with the ideal images

featured in mass media, which can increase their dissatisfaction about their bodies, lower their self-esteem, and increase negative behaviors such as eating disorders and dieting. Such psychological changes could lead to positive attitudes and intentions toward cosmetic surgery, which have the potential to increase the demand for cosmetic surgery (Sharp, Tiggemann, & Mattiske, 2014; Ashikali, Dittmar, & Ayers, The Effect of Cosmetic Surgery Reality TV Shows on Adolescent Girls' Body Image, 2014; Zhang M. , 2012).

In recent years, media scholars have begun a more in-depth examination of digital advertising's role in promoting cosmetic surgery. Due to the flexibility of digital platforms, the promotion of cosmetic surgery advertising has also adapted to various available outlets. Many researchers have begun to study the relationship between digital media and cosmetic surgery advertising. In China, current digital advertising mainly takes place in several mainstream platforms: WeChat, Weibo (Chinese Twitter), and TikTok. The different platforms provide numerous new advertising formats. Industries also take advantages of the opportunities to strategically target different groups of customers, and cosmetic surgery is one such industry. Content marketing, one form of covert advertising, is widely used to increase consumers' attraction and boost brand recognition or revenue, and instill consumption.

In this study, I examine the likely contributions of advertising in mass media in the exponential increase of cosmetic surgery in the Chinese marketplace. This study is centered on the advertising strategies of the largest Chinese medical aesthetic service provider, So-Young International. Their major channel of business includes providing medical aesthetic content through social media platforms. WeChat, as the most popular digital network platform in China, provides powerful and versatile content service for both users and businesses.

The primary purpose of this study is to examine how So-Young uses WeChat to present covert advertisements that promote cosmetic surgery. To my knowledge, there are currently no studies that examine how covert advertisements are employed to promote cosmetic surgery in the Chinese consumer market. A content analysis approach is used to study articles posted by So-Young on the WeChat platform. A total of 267 articles published between 2015 and 2019 were systematically examined and analyzed. Latent elements feature in the articles were identified and coded for comparison with WeChat users' engagement. This research is important as it may provide insights in the following areas: 1) how So-Young uses covert advertisements to skirt medical advertising regulations, and 2) the types of covert advertisements presented by So-Young that gain the most attention from WeChat users. Both areas of study are important for all consumers who use the So-Young WeChat platform and similar sites; however, they are especially important for adolescents who do not yet have a well-developed cognitive ability and are less likely to have a depth of experience with advertising to decipher covert advertising.

CHAPTER TWO: LITERATURE REVIEW

Some scholars have studied cosmetic surgery advertising in the context of mass media; however, few empirical studies have examined the impact of cosmetic surgery advertising in the digital media space. In an effort to add to the body of knowledge in this area, this study aims to explore the advertising strategies used by So-Young International Inc., a China-based holding company, in its WeChat app platform. The literature review includes background information and a brief history of body image and cosmetic surgery advertising. It is important to examine the impact of sociocultural milieu on body image in advertising on WeChat as it is used heavily by adolescents.

Cosmetic Surgery

Description of Cosmetic Surgery

The term cosmetic surgery is now a part of everyday language; however, it is often unclear how the term is being defined. Therefore, it is important to be transparent regarding how the term is being defined in this study.

According to Haiken, when first introduced to the general public both cosmetic and reconstructive surgery were listed as plastic surgery, with “beauty” or “aesthetic” surgery included as aliases (1997). The American Society of Plastic Surgeons (ASPS) provides detailed definitions to differentiate cosmetic surgery from reconstructive surgery. According to ASPS, cosmetic surgery is to help people acquire a better appearance and increase their confidence through changing their facial or body structure, where the procedure can be adopted in surgical or nonsurgical ways (American Society of Plastic Surgeons, 2020). In comparison, reconstructive surgery is performed for functionality and health needs to improve quality of life

(American Society of Plastic Surgeons, 2020). In China, there is a slight distinction between reconstructive surgery and cosmetic surgery, the former is performed for medical purposes, and the latter for cosmetic purposes related to self-improvement (Hua, 2013). Finally, according to the Chinese Administrative Measures of Medical Cosmetology Service, “medical cosmetology refers to use of surgery, drugs, medical equipment and other traumatic or invasive medical technology to repair and remodel the appearance of people and various parts of the human body” (National Health Commission of the People's Republic of China, 2018). Cosmetic surgery is an elective surgery that people seek out to enhance beauty (Sullivan, *Cosmetic Surgery: The Cutting Edge of Commercial Medicine in America*, 2001; Haiken, 1997).

Development of Cosmetic Surgery

The earliest historical record of cosmetic surgery can be traced to 600 B.C. in India by the physician Sushruta Samhita. In order to help patients whose noses were cut off as punishment, reconstruction surgical techniques like skin grafting were originally created and recorded by Sushruta (Columbia University Irving Medical Center, n.d.). In Europe, during the 16th century, a huge demand for plastic surgery techniques arose because of massive war injuries (Haiken, 1997, p. 5). The cosmetic surgery market surged after the return of soldiers from World War I & II. Cosmetic surgery was one method used to provide injured soldiers with hope and confidence for returning to normal life. As a result of its rapid development and pervasiveness, it became a norm in Western culture (Haiken, 1997).

The development of the plastic surgery industry in China experienced ups and downs. It was mainly influenced by Western countries and the neighboring South Korea. Dr. Jerome P. Webster, a well-known U.S. surgeon, introduced knowledge about plastic surgery to China at the

beginning of the twentieth century (Hua, 2013). A series of wars, including the Sino-Japanese War, Chinese Civil War and Korean War, brought reconstructive surgery to China. The political movement and the ideological tenor of communist beauty in the following decades allowed for the development of reconstructive surgery but not cosmetic surgery. Such surgeries were allowed for recovery of function, but not for aesthetic purposes. Therefore, the Chinese cosmetic surgery industry was stagnant. The prevalence of cosmetic surgery emerged in the 1980s during the reform and opening-up policy. Plastic surgery was strongly supported by the government as a science. Based on the data collected by National Bureau of Statistics of China, the average disposable income per person was 28,228 RMB (\$4,343, in current USD) in 2018 compared with only 171.2 RMB (\$26 USD) in 1978, representing a 500% increase across 40 years. As always, the amount of disposable income of urban households is higher when compared with rural households in any given year. In 2018, urban residents' disposable income was 39,250 RMB (\$6,038 USD) (National Bureau of Statistics of China, 2019). As a result of economic growth, people began to pay attention beyond their basic needs, such as caring about their appearance and body shape, which also lead to more positive attitudes about cosmetic surgery (Hua, 2013; Zhang & Zhang, 2019).

Current Cosmetic Surgery Market

The International Society of Aesthetic Plastic Surgery (ISAPS) published an annual report that provides global surgery statistics of certified plastic surgeons. According to the ISAPS 2010 Global Surgery Report (ISAPS, 2013), China ranks third, behind the United States and Brazil, in the number of plastic surgeons and the total number of cosmetic surgery procedures performed. This ranking remained constant for several years; however, according to a

2017 Deloitte report (2017), the 2015 global medical aesthetic market was valued at about \$52.4 billion, with the Chinese share worth about \$7.4 billion or 14% of the total market share. The analysis indicated that both the global and the Chinese medical aesthetic markets would have sustainable growth for the next five years. More specifically, the prediction for compounded annual growth rates of global and Chinese market scales would be about 5.5% and 22.7%. Furthermore, China was expected to reach 30% of the global market share in 2020. In reality however, the percentage of Chinese consumers who had medical aesthetic procedures was only 1.7 per thousand, which was far below that of the United States, Brazil and South Korea, where the rates were 12.6, 11.6 and 8.9 per thousand, respectively (Deloitte China, 2017). Due to the large population base of China and considerable popularity of cosmetic surgery, the Chinese market has huge room to grow. The 2019 iResearch report placed the 2018 Chinese market expenditures on aesthetic procedures at about 144.8 billion RMB or \$20 billion USD. In comparison, in 2017, the percentage of Chinese female consumers in the 18 to 40 age group was 7.4%, which represented a 5% increase during the three-year period examined (iResearch Inc., 2019). It is important to acknowledge, however, that these data came from an independent research firm as official China authorities, e.g., the Chinese Association of Plastics and Aesthetics (CAPA), does not provide public data on aesthetic surgery procedures.

Currently, cosmetic surgery businesses are flourishing in China. So-Young International Inc. is a company that mainly provides the online platform for consumers, surgeons and clinics to communicate. It is referred to as a cosmetic surgery “Yelp”. In addition to So-Young, there are several brands offering similar services such as GengMei (更美), YueMei (悦美), where Chinese clients are the primary target market. Although So-Young entered the market relatively late, compared with other similar enterprises, its monthly active members - two million in 2019 -

is far beyond its competitors. So-Young was really popular among medical aesthetics clinics and organizations with over seven thousand registered business users, which ranked second place among the top four platforms (MobTech, 2019). So-Young achieved its first year of positive net income in 2017. Since arriving on the market in 2013, its net income and total income in 2019 was 176 million and 1,151 million RMB, respectively (United States Securities and Exchange Commission, 2020). To date, So-Young has been the only company among similar enterprises to be listed on the NASDAQ U.S. stock market as SY. According to a NEWRANK report (2020), So-Young (新氧) was number nine on the list of the 500 most powerful official WeChat accounts. The next closest cosmetic surgery company, Gengmei, was listed in the 200th range. The 981,144 official accounts were ranked based on the number of posts, number of “reads” and “likes” in a whole year. So-Young published 2909 articles, which attracted more than 240 million “reads”; each article received an average of 84,791 “reads”.

In one word, in response to the exponential growth of consumer demand in the cosmetic surgery market, it can be anticipated that the number of cosmetic surgery institutions would also increase substantially. This potentially gives rise to a voluminous increase in advertisements from different medical institutions, to compete and earn their share in the ever-prosperous cosmetic surgery market.

Body Image

From a psychological perspective, body image is how people examine their body through personal perception and attitude. Generally, it's how people depict their outer appearance and how they look at their body parts (Slade, 1994). Thompson et al. (1999) indicates that lower self-evaluation about physical appearance and body shape could lead to many negative consequences,

which can have emotional, cognitive, and behavioral affects. Anxiety, depression and distress are some general negative reactions associated with body concern and lower body esteem.

Moreover, the risk of suffering from mental disorders like anorexia nervosa, bulimia nervosa and body image disorder also increases along with body dissatisfaction. In contrast, body appreciation positively affects both psychological and physical health, which also contributes to avoidance of inappropriate dieting and increases in self-care (Tylka & Piran, 2019). Scholars have indicated that influence from family, peers and mass media impact individuals' assessment of body image. Seeking identification and establishing better interpersonal relationship with others, being more competitive in the career market and in marriage prospects are some reasons that motivate people to pursue body alterations.

The development of societal and sociocultural referencing standards of ideal beauty change over time and have a huge influence on people's attitudes about body image. Although the fat body shape was initially an idealized body image for Western people, it was gradually replaced with an hourglass-shaped, sensuous figure during the 19th century. Later on, the "Gibson Girl", Betty Grable, Marilyn Monroe and Twiggy all embodied the temporal sociocultural expectation toward the idealized body image (Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999). The celebrities were all attractive and had high mass media exposure. Harrison and Hefner (2008) also emphasized the important role that mass media have on children and adolescents. Early exposure to media contents served to increase the tendency to idealize the thin body image. For instance, messages about glamorizing lean body in print media and content that negatively framed heavier body sizes from electronic media like television, which all help to shape an ideal body image to audiences.

Thompson et al. (1999) maintained that messages generated to share through mass media usually reach a broad, diverse audience, and are influential in bolstering the cultural ideal image of women. Preferred body image has been widely integrated with brands through mass media vehicles by featuring attractive celebrities and models. Companies attempted to increase consumers' awareness of, and preference for, their brands through idealized female body images. Nevertheless, while there is support that the utilization of idealized body images helps companies boost the preference for a range of products, there is also empirical support that the same images may cause negative effects on consumers. Specifically, it is common for women and girls who are constantly exposed to attractive models, to engage in a downward comparison that results in dissatisfaction with their actual body.

Cosmetic surgery has become an acceptable 'treatment' to both cope with and overcome body dissatisfaction (Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999). In addition, various material items suggest success, e.g., luxury products, exclusive residence, and outstanding social life are associated with "material good life". Owning an attractive appearance is also considered as one of the embodiments of success. Aspiration toward material possessions of "material good life" is another primary ideal aspect of "body perfect", linked to idealized identity and is considered a factor that will increase a positive attitude toward cosmetic surgery (Henderson-King & Brooks, 2009; Teng, et al., 2017). The study found that women with a high level of materialism would become more dissatisfied with their body image, after constant exposure to cosmetic surgery advertising (Ashikali, Dittmar, & Ayers, The Impact of Cosmetic Surgery Advertising on Women' s Body Image and Attitudes Towards Cosmetic Surgery, 2017).

It's clear to see, body image, as an important factor that influences people's attitudes toward their physical appearance, has been greatly used in mass media. In other words, being

exposed to a world full of advertisements that promote “body perfect” ideals may increase the difficulty for people to appropriately evaluate their body image, Furthermore, it may play a positive role in shaping people’s intention toward pursuing cosmetic surgery.

Mass Media & Cosmetic Surgery Advertising

History of Cosmetic Surgery Advertising

Some surgeons questioned the morality of offering cosmetic surgery, and therefore the cosmetic surgery advertising (Sullivan, 2001; Haiken, 1997). Physicians were prohibited from soliciting patients based on the American Medical Association (AMA) advertising ban. The medical profession could not advertise legally until 1982 when the U.S. Supreme Court supported the Federal Trade Commission’s (FTC) proposal that advertisements would support a healthy competitive trade environment.

In the late 1970s, the first paid cosmetic surgery advertisements were launched by some California practitioners both in print and electronic media; specifically, telephone Yellow Pages, newspapers, magazines, television, and radio were early primary channels for cosmetic surgery advertisements Sullivan (2001). A range of cosmetic surgery advertisements were presented in diverse media channels. In an effort to become more competitive, many cosmetic surgeons featured their board certification from the American Society of Plastic and Reconstructive Surgeons (ASPRS) as evidence of their expertise. Other surgeons displayed images to promote surgical procedures, while in the 1980s others made use of before-and-after photographs of patients, even though some editors boycotted such contents. Drawings of male physicians and female patients were frequently portrayed in the Yellow Pages. Female patients or models were more often featured in print media, i.e., magazines, newspapers. Interestingly, ASPRS began

developing commercial cosmetic surgery advertisements in 1997 to encourage people to seek advice from board-certified surgeons. In addition, advertising was being blended into the editorial contents. These articles concealed advertisers' identity while highlighting positive outcomes of cosmetic surgical procedures, which are characteristics of native advertising.

History of Mass Media, Advertising and Cosmetic Surgery in China

In contrast to the development of cosmetic surgery advertising in the United States, the development of cosmetic surgery advertising in China moved in zigzags (See Appendix A for the timeline for history of mass media, advertising and cosmetic surgery in China). In the early 20th century, foreign trade brought many Westerners to China. Along with their arrival, Western commodities, entertainment, and fashions were also imported, prior to the establishment of the People's Republic of China. With the importation of foreign technology, the emergence of modern mass media channels like newspapers, magazines, and radio broadcasting drove the first advertising industry boom (Wang, 1997; Cheng & Chan, 2009). Image-based paper calendars were one of the earliest advertising tools that influenced Chinese beauty standards and cosmetic surgery demands. Calendars represented the epitome of the Chinese advertising boom. Companies offered calendars to consumers as gifts that showcased their brands and products, which were modeled by attractive models. Along with the import of Hollywood movies, there was constant exposure to attractive Western women through Chinese newsletters, magazines, and billboards. As such, Western women's clothing, make-up, even their appearance became the embodiment of modernity and fashion. As time passed, the women featured in the advertisements grew to reflect Western aesthetics, i.e., big eyes, double-fold eyelid, and plump figures instead of phoenix eyes and thin body shapes (Hua, 2013) (Appendix B).

The People's Republic of China was established in 1949. At that time, the major function of mass media was to promote political propaganda. Accompanying the ensuing revolutions, many trades like commercial advertisements and cosmetic surgery disappeared from public view. Magazines, one of most popular mass media vehicles, experienced their lowest circulation during the Cultural Revolution. Only 20 magazines were published during this period (Hooper, 1994; Wang, 1997). Print media also suffered dramatically during the Cultural Revolution. By 1970, only 42 newspapers were in print (Wang, 1997). Physicians who performed cosmetic surgery for the purpose of beauty during the 1960s and 1970s were labeled bourgeois enemies, honoring decadence. They were often reported and assaulted (Brownell, 2005). The ideology towards the proletariat and meager living standards resulted in a dearth of beauty and fashion in the marketplace, which included the cosmetic surgery industry (Hooper, 1994; Yang J. , 2011; Xu & Feiner, 2007). The social milieu under the Mao dynasty, dictated that beauty standards for women be highly uniform, aesthetically “de-sexed, militarized, and masculine” (Xu & Feiner, 2007, p. 313).

The implementation of China's reform and open-up policy not only encouraged the advancement of mass media, it also helped bring advertising and cosmetic surgery back into the public sphere. According to Li (2016), advertising agencies gradually returned in the late 1970s. The first Chinese television commercial, which featured a tonic liquor, aired in 1979 (Miller, 2011). The new policy led to substantial mass media growth. By 1980, there were 382 newspapers, slightly more than 2,000 magazines, and 38 radio stations (Hazelbarth, 1997; Wang, 1997). In the 1980s, taking a cue from conservative voices, the Chinese government established strict control over Western advertising to limit its influence on the Chinese population. Policies toward Western advertising were eased in the 1990s in conjunction the increased liberalization

and global communication. The use of Western advertising strategies and concepts contributed to expanding the Chinese advertising industry. This period was also a time of transition for the health care system. Pharmaceutical and healthcare industries, which included the cosmetic surgery industry, began using advertising to attract consumers (Cheng & Chan, 2009). Chinese cosmetic surgery advertising began in earnest during the 1990s.

Early in the 21st century (Sullivan, 2001), China became a member of the World Trade Organization (WTO). As a result, a great number of foreign investors entered the Chinese market, providing China access to a great deal of external global economic influence. Mass media and advertising grew by leaps and bounds. Special and supplemental editions were created to attract more advertising in the printed media (Li, 2016). Fashion magazines, newspapers, and especially tabloids, which enticed the urban middle class, were the major channels for placing cosmetic surgery advertising (Hua, 2013). Placing attractive models in advertisements was popular in print media (Hua, 2013; Luo, 2011). In the 2000s, television became the largest advertising channel, replacing print media, i.e., newspapers and magazines (Cheng & Chan, 2009). Many cosmetic surgery advertisements and programs were launched on new media channels. Before-and-after photographs and pictures of attractive female models were widely used on official Chinese cosmetic surgery clinic websites (Luo, 2011). There are some common contents used in cosmetic surgery advertisements, such as physicians' information, introduction of facilities and clinic environments, and promotions with free trials. Hosting a series of global events such as the Beijing Olympic Games, the Shanghai World Expo, etc. all drove development of Internet advertising. The Chinese advertising market became the second largest worldwide. New regulations that limited television advertising time, the expansion of the internet, and the popularity of mobile phones, resulted in online advertising outpacing other

electronic media (Cai, 2019; Li, 2016). In 2010, the Chinese Advertising industry total revenue was \$47.7 billion, and increased to \$124.9 billion in a mere nine years. The internet became the most popular medium for cosmetic surgery advertising. No longer was the industry limited to direct email, banner ads, or sponsor ads. Additionally, native advertising and content marketing quickly gained a large presence on social media platforms like WeChat, Youku and Sina Weibo.

Generations Facing Cosmetic Surgery

Due to the changing sociocultural context and the development of high technology, some segments of the Chinese population changed their perspectives of ideal appearance and body image. With the implementation of the open-up policy, some segments of the Chinese population became prosperous. As levels of discretionary income increased, the demand for cosmetic surgery increased, primarily for wealthy individuals and public figures such as actresses and celebrities. Chinese society has a high-power distance, based on Hofstede's culture dimension theory. Individuals who hold the most power are people of higher social, economic, or authoritative status. They are respected by those who have lower status; some of them are even imitated in appearance and behavior by the public.

On the other hand, the open-up policy allowed Western products and culture to enter China, which greatly boosted local economic and material development. Mass media played a significant role in introducing the Chinese population to diverse cultures and consumption options. In comparison with one-way message delivery from traditional mass media, channels like social media and mobile presented two-way interaction between marketers and consumers. Moreover, many after millennial generation grew up with the internet and social media and were exposed to this environment of rapid transmission of information. Western figures frequently

appeared on mass media, influencing the Chinese population's ideas of beauty, such as Western standards that promote slim or thin bodies (Lindridge & Wang, 2008; Jung, 2018). Similarly, beginning in the late 1990s, the Korean Wave (Chinese pronunciation as "Hallyu") was a phenomenon that transmitted Korean-oriented culture to other Asian nations typically through Korean dramas and K-pop music (Kim & Lee, 2019). Korean youth culture is continually transmitted to the Chinese population from various online media sources and has resulted in Chinese consumption of eternal beauty preferences, including cosmetic surgery to achieve desired results (Jung, 2018). In comparison with older generations, younger Chinese are more receptive to cosmetic surgery. With the exception of thinness as the ideal beauty, a recent study supports that more Chinese are undergoing cosmetic surgeries that feature Asian or indigenous aesthetic beauty ideals (Samizadeh & Wu, 2017).

A survey conducted by Lin and Li (2019) revealed that people over 29 years of age reported the strongest intention to get cosmetic surgery; however, adolescents made up the largest percentage of participants who intended to seek out cosmetic surgery. Interestingly, their results showed over 40% of participants, who underwent cosmetic surgery or had such intentions were from families below the middle-income level, and a household income lower than 50,000 RMB (\$7,142). This result indicates that financial factors may no longer be the most salient element preventing Chinese from having cosmetic surgery. In addition, family has a huge impact on adolescents and young people's ideas and decision making are shaped by the high level of collectivism in Chinese society. According to Lindridge and Wang (2008), many Chinese adolescents and young people are striving for higher social identities through cosmetic surgery. Parental pressure may be one of the significant factors guiding their desire to seek out cosmetic surgery. One person's success will bring honor to the whole family, and cosmetic surgery is a

direct investment to make success attainable (Lindridge & Wang, 2008; Hua, 2013). Although regulations emphasize that people under age 18 must have parental permission to schedule cosmetic surgery, in reality, some parents prod their children to proceed with appearance enhancing surgeries (Lin & Li, 2019; Hua, 2013).

Digital Media in China

Movement from Traditional to Digital

Digital technological advances have resulted in a tremendous shift from traditional to digital media in China. As a result, online media became a space for companies to advertise. Online advertising in China reached 484.4 billion RMB in 2018. More than 75% of the advertisements were launched on mobile terminals (iResearch Inc., 2019). Over 90% of Chinese adolescents use mobile phones as their primary access to the internet (Yang Y. , 2018). Chinese adults spend an average of nearly 4 hours daily on digital media, an increase of 45 minutes since 2016, which accounts for nearly 59% of total time spent on all media forms. The average amount of time spent on traditional media is predicted to decrease to 36.3% in 2021 (Man-Chung, 2019). Moreover, mobile advertising plays a predominant role and is predicted to occupy 78.8% of the total digital advertising spending in 2023 (Cheung, 2019).

Compared with using traditional mass media to place ads, online advertising has more advantages, such as immediacy, extensive audience coverage, and interaction among users. While the development of high tech has helped create a better online surfing environment for users, including allowing certain online advertisements - such as banner ads and pop-up ads - to be blocked, it also positively impacted the advertising industry. Specifically, the emergence of social media provided extensive platforms for companies to advertise their brands, products and

services. Around 2010, Sina Weibo, WeChat, Youku and some other social media platforms were pervasive. Content marketing as one of the major covert advertising approaches were greatly used to bypass the advertising barriers within those platforms. The capacity to detect the commercial message placed in covert advertising varies with each individual; however, adolescents' ability to recognize covert advertising is generally lower when compared with adults (Wojdyski & Evans, 2020). Therefore, a study about covert advertising regarding cosmetic surgery can provide insights regarding how they may affect one vulnerable population, adolescents.

Social Media Platform in China – WeChat

More people now use social media than traditional media. In fact, by 2019, over one billion Chinese were active on social media platforms, representing an increase of 15 million users compared with the previous year, representing a penetration rate of 72% (Hootsuite & We Are Social, 2020). WeChat ranks first in the Chinese market and is the fifth most used social media worldwide (Hootsuite & We Are Social, 2020). The multipurpose social media app reported more than 1.1 billion active users in 2020 (Hootsuite & We Are Social, 2020). As one of the most popular mobile applications, WeChat continues to expand its teenage customer base. In 2018, WeChat was reported to be used by 85% of Chinese teenagers (Yang Y. , 2018).

The initial concept of WeChat was focused on the messaging function, providing private communication among friends and people who know each other, similar to WhatsApp. More features such as WeChat Moments, WeChat Official Accounts, and Mini Programs came out with constant updates, which also helped broaden advertising channels. Some paid ads in WeChat could be found as banner ads interspersed in official accounts' articles as Mini

Programs, or directly placed into WeChat Moment (Appendix C). Similar to Instagram and Facebook, there are some obvious paid advertisements on WeChat; however, many covert advertisements also exist for both users and organizations. The presentation of advertisements is becoming more subtle and undetectable.

WeChat Moment is also called friends' circle, as it's a place that chronologically lists friends posts or updates, which is similar to tweets (Chen, Mao, & Qiu, 2018). Mini Programs were launched in 2017, and its unique feature caters to more users' needs. WeChat users can easily access some applications built into in mobile phones through the relevant mini program that individual companies create, such as McDonalds, Starbucks, Adidas, etc. For instance, people can make direct purchases for Adidas or Nike through their own mini programs or submit delivery or pick up orders for McDonalds or Starbucks without switching to any external phone applications. 580,000 mini programs had been launched on WeChat by the end of 2017. At the same time, market studies also revealed that 57.3% of the one million developers perceived this function helped to increase new users by more than 10%, and around 72.8% of developers reported that sales revenues were boosted (China Academy of Information and Communications Technology, 2018).

Like Facebook's business page, WeChat official accounts are usually operated by companies, retailers, organizations, or We-Media. There are two categories within WeChat official accounts, including subscription accounts and service accounts (Appendix C). The major differences between them are the messages' display interface and the frequency of message transmission. Service accounts display companies' messages among the friends' dialogue list, and they are only allowed to be posted four times monthly. In comparison, subscription accounts can send one message to all subscribers each day and generally all these types of accounts

display their message under a uniform folder called Subscriptions. The official accounts mainly help companies and brands increase potential consumers and maintain existing users through periodic posts about company-related news, articles, and promotions (Chen, Mao, & Qiu, 2018). Among the 10 million official account operators, 32% of them sell products through this channel (China Academy of Information and Communications Technology, 2018). All brands or companies can establish an official account for free. Operating a verified account costs 300RMB (less than \$45) annually. Instead of launching paid ads on WeChat, many companies choose to utilize their official accounts to present on propaganda and advertisements. The advertising is blended into the contents so well it is arguably indistinguishable.

Simply put, there is an increasingly substantial blurring of the traditional hard line placed between advertisements and editorial content on the platform. Adapting these covert advertising methods could serve to conceal the intention of selling brands or products. It appears that cosmetic surgery advertisements follow a similar presentation pattern that is even more difficult for people to recognize, especially if they are not made aware of information that is not included, i.e., potential risks and complications. Posing as social media posts from a brand's official account is one of the most popular ways to present covert cosmetic surgery advertising in China.

Covert Advertising

Covert advertising has many different forms such as content marketing, embedded advertising, advertorial, etc., but all these forms share the same purpose of camouflaging sellers' intentions. Covert advertising has existed for a long time and can be found in different media, print and broadcast. The presentation formats of covert advertising are diverse. Persuasion knowledge, which is consumers' knowledge to identify the persuasion attempts from marketers,

help consumer respond and act toward those attempts adaptively (Friestad & Wright, 1994). Wojdyski & Evans (2020) emphasized that whether covert advertising works on consumers or not greatly depends on consumers' ability to recognize them as ads. People with lower advertising recognition skills may recognize covert advertising as simply content, which may easily affect their preferences towards the product introduced, thus increasing purchase intention. In order to decrease consumers' detection of advertising and hide its commercial goal, covert advertising blends into the surrounding context through imitating the content or design. Additionally, "informational or entertainment content" is mimicked more frequently. Disclosures can be understood as the clues or hints like using phrases of "advertising", "sponsored", etc., which play an important role in helping people to better identify the ads, as well as increasing people's persuasion knowledge. A resistance strategy similar to a defense mechanism would be automatically triggered when people sense the content of message contains persuasive motivations (Friestad & Wright, 1994).

In other words, if disclosures are missed by people or if they don't even exist in native advertisements or content marketing, people's guard may be lowered and they may be unable to link the content with advertising, which can influence consumers' behavior. Many scholars have found that if consumers detect and understand disclosures correctly, it influences their identification of native ads. Visual appearance of advertising disclosures can be emphasized through design, which could effectively increase the potential level of identification by consumers (Wojdyski & Evans, 2020; Campbell & Grimm, 2018). Using disclosures to increase ad recognition is considered a top-down process, while a bottom-up process is found when people better identify ads when they suspect advertising intentions delivered by the content of messages. Wojdyski & Evans (2020) concluded that consumers' ability to recognize

advertisements also can be increased by perceived credibility of the message source. Celebrities or public figures who are highly regarded would be perceived as naturally credible by consumers.

Chinese Advertisement Regulations

The Advertising Law of People's Republic of China (PRC) and *Measures for the Administration of Medical Advertisements* (Central People's Government of the People's Republic of China, 2006) outline several medical advertisement regulations. The term 'medical advertisements' refers to advertisements that take place on a variety of modalities or media forms that introduce a medical organization or service direct or indirectly.

The latest version of *The Advertising Law of People's Republic of China (PRC)* launched in 2015, Article Nine lists 11 circumstances that cannot be included in advertisements. One of them clearly points out that the phrases such as “national level”, “superior”, “best” and other terms are prohibited in the ads, but details about other terms were not provided, causing heated discussion from the public about these words. Cui (2017) also concluded that many phrases such as “first”, “global”, “world-class”, which are suspected of providing exaggerated information, would be forbidden. The advertising time frame should be clearly listed. In addition, words that deceive or lure consumers to purchase an unnecessary product, i.e., “congratulations on prize-winning” or “free of charge for all people”, should also be prohibited. Currently, many online platforms have introduced their own regulations, which provide more detailed information based on the new advertising law.

Article Fourteen clearly states that advertising should be recognized by consumers and that mass media shall not launch advertisements disguised as news. Several articles are listed that

relate to medical advertisements, which mainly focus on the aspects of medical treatment, i.e., medicine, medical equipment, and health care foods. It is worth noting that the law clearly points to several concepts that should be prohibited in the ads, which are any assertion about the functionality of medical products or services, cure rates, comparison of the functionality or safety of other companies, recommendations from celebrity endorsers, etc.

Article Forty states that certain advertisements for medicine, cosmetic, alcohol, beauty, and some other products are prohibited from being launched on mass media channels that are targeted at adolescents (Central People's Government of the People's Republic of China, 2015). There is not a clear definition about what are considered as mass media channels in the revised law. In addition, the vague wording of the article makes it difficult to determine if advertisements are truly targeting adolescents.

It appears that in order to circumvent required regulations, cosmetic surgery advertisements are becoming more covert. More specifically, editorial content becomes a proxy for cosmetic surgery advertising, blurring the hard line perceived to separate editorial content and advertising. Although laws exist that prohibit various content from being featured in advertising, e.g., related to some medical technologies and treatments, therapeutic effectiveness, and names or images of patients, this information is often found in the content companies provide. Simply put, it is unclear from examining advertising regulations what information can be included in advertisements.

The new laws were enacted to make the advertising industry more standardized and to protect consumers. However, native advertising seems, to a great extent, to bypass these regulations due to its unique presentation. Simply put, more Chinese advertisers are taking advantage of the social media platforms like WeChat and Weibo to present covert advertising.

Existing Research about Mass Media, Cosmetic Surgery Advertising

Many studies report that Chinese people are negatively impacted by Western mass media and advertising, for example, in regard to body image and eating behaviors (Madanat, Lindsay, Hawks, & Ding, 2011). A study conducted at a university in Chongqing that included 456 undergraduate females examined their exposure to Western media compared with exposure to Chinese/Asian media, such as social media, videos, and magazines, regarding participants' body image concerns. The findings are consistent with the emerging notion that Chinese women's idealized body image concerns are impacted more from the culturally proximal media like the Chinese/Asian mass media, compared with Western media portrayals (Jackson, Jiang, & Chen, 2016).

Ashikali, Dittmar and Ayers (2017) ran two online experiments using a between-subject design to study how young women's perceptions of body image and cosmetic surgery changed after exposure to cosmetic surgery advertisements, and whether different kinds of image would influence young females' perceptions about surgery as well. They recruited 162 and 151 students, respectively, from a university in England. The control condition ads for both studies were the same, in which they used a flower shop advertisement that did not include any female image or slogans about appearance. Each study had three additional conditions. To examine the effectiveness of information in the advertisements, in Study One, Ashikali et al. (2017), used attractive female images in all the three conditions. The differences among the three conditions respectively were slogans related to benefits of undergoing cosmetic surgery, slogans with additional promotion messages, and slogans with additional risk information. In the second study, the importance of images was the research focus, where images used varied for different advertisements. The three ads included images with 1) models, 2) clinics, and 3) surgical

scalpels, respectively. The advertising information remained the same as those in the first study. The results revealed that young women's perceptions toward weight and physical appearance were negatively influenced through exposure to cosmetic surgery advertising. People are becoming more concerned and dissatisfied with their physical appearance and body image, which led to increased attitudes toward surgery. However, their study did not show a significant impact from the distribution of information and images in the ads.

In order to better understand how the content of cosmetic surgery advertising will impact consumers, Park and Allgayer (2018) surveyed 343 college students and found that the students' perception of benefits of cosmetic surgery and intention of undergoing cosmetic surgery increased with the time they were exposed to ads. However, data collected from those participants didn't show relevance between risks they perceived from cosmetic surgery ads and the exposure frequency of ads. Though many regulations banned certain types of information in cosmetic surgery advertisements, a lot of information continues to appear in these advertisements. The researchers proposed 27 elements that usually appear in the ads to determine how many were perceived to include helpful information. The factors included "surgeon's education and training, price, before-and-after photos of patients, patient testimonials, information on how to obtain consultation," etc. (Park & Allgayer, 2018) were considered as helpful or valuable information toward consumers.

Traditional mass media have been widely studied regarding their impact on women's intentions to have cosmetic surgery. Social media as the newest channel are getting more attention from scholars. Walker, Krumhber, Dayan and Furnham (2019) recruited 118 young women between 18-29 years of age who owned a public account on Instagram to study whether their intentions to have cosmetic surgery increased after viewing pictures of other young women

who had cosmetic surgery. The results support that the participants became more dissatisfied with their appearance. In addition, an investigation through a two-wave panel survey with 604 Dutch adolescents, 11 to 18 years of age, found that those who viewed social media sites were more likely to say they intended to have cosmetic surgery (de Vries, Peter, Nikken, & de Graaf, 2014). According to Tiggemann and Slater (2013), 10-12-year-old pre-teenage girls' body image concerns are influenced by the amount of time they spend online with social networking sites such as Facebook and MySpace. That is, there is a positive correlation between body image concerns and the time they spend on social networking sites.

Existing research discusses the impact traditional media advertisements have on consumers' attitudes toward cosmetic surgery. In addition, scholars also follow with interest of social media such as Twitter, Instagram, etc., and further explore how those online cosmetic surgery ads or information would influence consumers. For instance, one study examined the use of hashtags by cosmetic surgeons on Twitter (Branford, et al., 2016); another study looked at cosmetic surgery advertisements that were packaged in the form of online news (Moon, 2015); YouTube videos have also been analyzed, where many cosmetic surgery videos were highlighted with benefits while leaving out the associated risks (Wen, Chia, & Hao, 2015).

Although native advertising or content marketing are topics that scholars widely explore, there is a lack of research relating to cosmetic surgery advertising that targets Chinese adolescents. Therefore, in this study, I strive to begin filling that gap to help the public understand how the cosmetic surgery industry uses advertising on social media platforms to position beauty as a primary role in the success of one's life, i.e., career and marriage. Simply put, in this study I analyze So-Young advertisements on WeChat to examine how the company uses the social media platform to create both a desire and need for cosmetic surgery.

Theoretical Frameworks

One Model and two theories guide this research, i.e., the heuristic-systematic model, social comparison and objectification theory. Some people pursue beauty through cosmetic surgery. Dissatisfaction with one's body image or physical appearance is considered one of the salient motivations that lead to a positive attitude toward body modification and body modification behavior such as eating disorders and cosmetic surgery. The heuristic-systematic model helps annotate how people process external information. This model guides understanding of content used to attract consumers to seek out cosmetic surgery. Both social comparison and objectification theory aid understanding of the relationship between media exposure and psychological and physical changes.

Heuristic-Systematic Model (HSM)

Shelly Chaiken introduced the heuristic-systematic model in 1980s, which elaborates how people's opinions are influenced through persuasive messages (Chaiken, 1980). There is a similar dual-processing model called elaboration likelihood model (ELM), which emphasizes people's attitudes will change through central or peripheral route thinking. The level of involvement is the key factor that influences the persuasion processing route, and further effect people's decision making. In comparison, Chaiken emphasizes two modes of information process, i.e., heuristic and systematic processing. Sufficient motivation and ability to interpret information are necessary elements when persuasion goes through the systematic processing. This kind of information processing occurs when individuals receive some informational cues and process the value of the message. Those cues are presented as rational appeals in the form of

product or brand information. By contrast, if an individual lacks motivation or ability to process information, heuristic cues are more likely to influence their decisions.

Social Comparison Theory

Social comparison theory was originally proposed by Leon Festinger in 1954. Festinger developed several hypotheses. First, he assumed that individuals have an initial impulse to compare their opinions and abilities with others. Individuals evaluate by comparing with others, even under circumstances that lack objective and non-social measures, though such evaluations are usually unstable. Festinger also posited that individuals do the comparison with those people who share similar abilities and thoughts (Festinger, 1954).

The social comparison theory was developed and revised over time, and new viewpoints and adaptations emerged in different disciplines. Generally speaking, a person usually forms bidirectional comparison due to individual differences, which is either upward or downward.

Upward comparison always appears when individuals assess themselves as inferior in the relationship. In situations where people compare their own body shape or physical appearance with attractive celebrities or models, people may perceive themselves as imperfect and unattractive. Thus, increasing their dissatisfaction about their physical appearance and body image may become a motivation to self-improvement due to the upward comparison. By contrast, self-enhancement occurs when in the downward comparison, individuals perceived themselves as superior to others (Wood, 1989). For example, a boss may compare himself with his employees, or a mature adult may compare herself with a child. Martin and Gentry (1997) indicated that pre-adolescent and adolescent girls would provide negative comments when they

evaluated themselves, and their perceptions toward physical attractiveness would decrease; if they had a downward comparison, then they would have a reverse self-perception.

The social environment is a factor that influences individuals' comparisons. This important factor was not included in Festinger's original theory. Lewallen and Behm-Morawitz (2016) reported that both girls and boys compare their physical appearance with others throughout adolescence, even though their ability to compare is not well developed. Lacking the ability to compare objectively, some adolescents "follow the herd" to trace the current trend, which leads to self-dissatisfaction. For instance, some adolescents received cosmetic surgery to catch up with fashion trends or be more like their idols. People usually focus on a single dimension such as personal attributes, beauty, etc. in making a comparison; however, there are other factors that affect the evaluation. For example, if a person compares herself with another successful person's career, the person's career would be the major dimension of comparison, but other dimensions such as educational background and personal image all have an influence.

Mass media, peers, and family have been widely studied and considered as the primary sources that influenced individuals' idealized standard of beauty of physical appearance and body image (Irving, 1990). People usually experience more pressure for ideal beauty standards, typified by universalistic figures such as attractive models and celebrities from mass media and followed by peers (Morrison, Kalin, & Morrison, 2004; Irving, 1990). Several reality TV shows that focused on cosmetic surgery contents, including "Extreme Makeover" and "The Swan" have been found to affect women's attitudes toward to their body image and cosmetic surgery (Ashikali, Dittmar, & Ayers, The Impact of Cosmetic Surgery Advertising on Women' s Body Image and Attitudes Towards Cosmetic Surgery, 2017).

At the same time, many studies also use this theory to study consequences that are produced after exposing individuals to mass and or digital media with idealized beauty images. There are several main outcomes linked to upward appearance-focused comparisons, including negative self-perceptions of attractiveness, lower self-esteem, and increased body dissatisfaction. In addition, some people may also have a series of negative behaviors, such as eating disorder, extreme weight-loss, and dieting. These problematic outcomes occur along with self-dissatisfaction due to a comparison with ideal images (Tiggemann & McGill, 2004; Irving, 1990; Lewallen & Behm-Morawitz, 2016; Morrison, Kalin, & Morrison, 2004).

Objectification Theory

Sexual objectification is generally understood as a situation when observers pay more attention to the observed person's physical appearance and body image compared with internal attributes. Bartky stated that instead of perceiving women's personality by their physical appearance, they are judged and evaluated by their 'sexual parts or sexual functions' (1990, p.20). The male gaze always focuses on women's sexual parts like breasts, legs or hips. Such sexualized gazing can be seen as one of the embodiments of objectification that appeared in both actual social life and visual media. Existing studies show that women, compared with men, are more objectified in visual media through temporal advertisements and magazines. This phenomenon of objective gazing may lead to an attempt to assimilate audiences imperceptibly.

Fredrickson and Roberts (1997) propose the objectification theory, which emphasizes that self-objectification occurs when girls and women treat their bodies as objects and perceive their value based on how observers look at and evaluate them. Self-objectification is defined as the way that people internalized external beauty standards on their physical self. According to

Ching and Xu (2019), the sociocultural milieu plays an important role on self-objectification and influences women in both direct and indirect ways. More specifically, women will be influenced directly through receiving appearance critiques and gazes from males. On the other side, if the life environment or favorite media is inundated with content of sexuality, this may increase women's self-objectification in an indirect way. In the meantime, self-objectification is also regarded as leading to negative consequences such as body dissatisfaction and body shame, lower self-esteem, eating disorders, sexual dysfunctions and so on (Fredrickson & Roberts, 1997; Ching & Xu, 2019).

When the objectification theory was first developed, there already existed a body of research that illuminated how more attractive women have a less difficult time becoming successful. For instance, overweight women usually possess lower levels of education, employment, and interpersonal relationships. In contrast, attractive women find it easier to achieve success socially, economically, and romantically (Fredrickson & Roberts, 1997). Bartky (1990) pointed out that women's bodies are objectified to stand for themselves under the depiction of visual media. Later, Dittmar (2008) proposed a consumer culture influenced model, which emphasized the importance of media as a salient source in the contemporary society. Media not only effectively promote as ideal female body image, they also pair it with materialistic pursuits; the Kardashian family is a great example of this. Obviously, the physical appearance and the extremely luxurious Kardashian lifestyle influence how some individuals perceive ideal beauty and successful life. Continual exposure to media portrayals of the ideal "body perfect" ideals and "material good life" influences individuals' building of their "ideal self" (Dittmar, 2008; Ching & Xu, 2019). Some individuals go so far as to engage in self reconstruction through cosmetic surgery.

Formulation of research questions and hypotheses

This research used So-Young (新氧) International Inc. as a case to study regarding how a third-party company presents covert advertising on its WeChat space.

So-Young was established in 2013. The company provides information about cosmetic surgery clinics, features different surgery products, and provides consumer reviews about their cosmetic surgery experiences. It also offers an abundance of medical aesthetic or cosmetic surgery related information on its official WeChat account. Both large scale cosmetic surgery hospitals and small-scale private clinical advertise on So-Young's WeChat platform. The company adopts the online to offline (O2O) business model, featuring a variety of advisements to attract more users and to increase revenue. There are a number of Chinese companies that compete with So-Young; however, So-Young is the first Chinese cosmetic surgery company to be listed on the U.S. stock market, making it an important case study.

So-Young's WeChat posts appear as thinly veiled popular medical science articles. Many of the articles focus on celebrity gossip news. Rather than directly touting cosmetic surgery businesses, most posts subtly promote the concept that ideal beauty is important as it can positively influence or enhance one's life. And most importantly, the regulations established for medical advertisements do not seem to apply to the content presented of So-Young's site.

Although many research studies about cosmetic surgery advertising on traditional and digital media channels have been conducted, to my knowledge there are no studies that research the Chinese social media channel WeChat in regard to how companies use the social media platform to present covert cosmetic surgery advertisements. The two main objectives of this study are to:

- 1) Identify general advertising patterns in So-Young's WeChat posts that are associated with covert/native advertising, and
- 2) Identify the number and types of content and visual elements in posts associated with consumer engagement.

By addressing these issues, the research findings can be used to identify the degree of cosmetic surgery social media advertising that could be considered "covert," and understand what elements of those ads are likely to generate a positive response from consumers. The findings can inform policy and regulators, and social media effects advertising theory.

Four Elements of So-Young's WeChat Posts

This is a pilot study about the content-based cosmetic surgery advertising presented on the WeChat platform. Previous research has proposed that consumers' attitudes toward ads become more positive if they are hooked by narrative advertising (Chang, "Being Hooked" By Editorial Content: The Implications for Processing Narrative Advertising, 2009). This kind of ads are typically featured in telling a story, which is also widely used in editorial advertisements as well. Except for understanding the narrative content, the audience is also likely to put themselves in the hypothetical scenarios, which also is called a mental simulation. Chang (2012) also pointed out two major functions that mental simulation provides, i.e., problem solving and emotion regulation.

A content analysis examining latent variables was first carried out to reveal possible patterns in the articles posted by So-Young. Content analysis is an unobtrusive research method commonly used in social studies and communication research. Content can be approached by two different means, identifying either the manifest content (quantitative) or latent content

(qualitative). As uniquely positioned by So-Young, it rarely makes their selling intentions apparent in articles posted on the WeChat official account. Rather, it instills the concept of achieving beauty through external means by making connections to popular culture, health, aesthetics, career, etc. This study analyzes the underlying latent meaning of contents and recognizes the potential structure of articles, which may contribute to shaping people's aesthetic ideals and promoting cosmetic surgery.

This study follows systematic procedures laid out by previous research (Babbie, 2014; Berg, 2001; Zhang & Wildemuth, 2016). Latent content analysis requires researchers to subjectively identify the underlying meaning in the defined unit of analysis, which in our case would be the entire article (Berg, 2001). To proceed, the researcher first read an extensive numbers of articles posted by So-Young, to become familiar with the overall content and general themes present among articles. Since there is no previous literature available in this specific area of study, an inductive reasoning process was used to identify latent meanings grounded within the posts (Zhang & Wildemuth, 2016). After an extensive reading of over 100 articles posted by So-Young on WeChat during 2015-2020, a number of common schemes emerged, including but not limited to gossip about celebrities, entertainment news, movies and drama review, physical beauty, aesthetics, cosmetic surgery, make up, beauty products, fashion, etc. There are evident similarities and differences, as well as recognizable boundaries among the topics present in articles. Within them, four elements were recognized as mutually exclusive categories in So-Young's articles: hooks, problem raising (beauty framing), solutions, and overt advertising. The elements appear independently, or together in some combination. The elements may appear independently, or together in some combination (Figure 1).

Generally, articles start with a hook, in which the narrative content garners readers' attention within the first 15-30 seconds. Six topics were common: celebrity gossip, entertainment program information, movie/drama reviews, introduction or career path of celebrities/social influencers, current news, and patient diary personal cosmetic surgery experiences. Anything that was not represented in those six topics was labeled as other. Some articles did not have a hook, but began with problem raising or beauty framing. This element appeared when an issue or question relating to beauty was addressed. Physical appearance or body image was the most frequently used case; however, these articles also use other topics such as aesthetic knowledge and people's temperament/style to defined beauty and barriers to being beautiful. Solutions often addressed the issues raised in the article. In addition to offering cosmetic surgery to solve problems, non-cosmetic solutions were offered, e.g., make-up, dress up or beauty products etc. The fourth element was an overt advertisement. Any information about a beauty products, promotions or interactive events sponsored by So-Young, and introductions and information about clinics or physicians were labeled as advertising.

Chaiken (1980) lists several common heuristic cues, such as consensus heuristic, expert heuristic, length of message, and number of arguments. In general, the longer the message and the more arguments is thought of as better.

RQ1a: Is reader engagement a function of the number of elements in an article?

RQ1b: Does a single element or multiple elements lead to a higher engagement number?

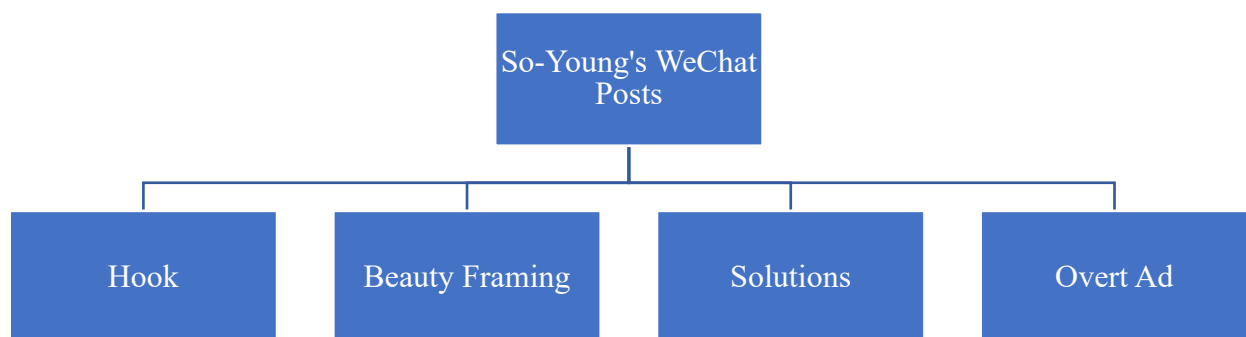
RQ2a: Which hook was used most often during the five-year period? Which hook resulted in more reader engagement?

RQ2b: Which problem was used most often during the five-year period? Which problem resulted in more reader engagement?

RQ2c: Which solution was used most often during the five-year period? Which solution resulted in more reader engagement?

RQ2d: Which type of overt advertising more often engaged readers?

Figure 1. Four Elements of So-Young's WeChat Posts



Image

Compared with written content, audio, video, and images are generally considered heuristic cues (Bohner, Moskowitz, & Chaiken, 1995). An individual's physical attractiveness has been used widely in advertisements as a visual cue. A large number of research studies have examined visual cues implicit influence in persuading consumers. Results support that people process messages delivered by attractive individuals through heuristic information cues. There is a higher likelihood for people to accept the views and opinions delivered by highly attractive people (Bohner, Moskowitz, & Chaiken, 1995). For example, information delivered by attractive people such as celebrities or social influencers are typically more often accepted by consumers (Yang W. , 2018). Celebrity endorsement is an effective, widely used advertising strategy.

Celebrities' high identification, familiarity, and likeability are effective elements that make them more influential (Biswas, Hussain, & O'Donnell, 2009). In order to bypass the restrictions of corresponding laws, instead of using celebrity endorsers, So-Young uses celebrity images in their WeChat posted to attract readers. Fashion stills, stage photos, and life photos of celebrities are frequently used. Additionally, other types of beauty related images are frequently used, such as before-and-after pictures of patients or celebrities, contrast pictures of celebrities, scientific explanation drawings about the structure of the human body or operating principles of beauty products and cosmetic surgery, and physician or clinic pictures.

RQ3: Which human figures were used most often in the So-Young articles, celebrity or non-celebrity?

RQ3a: Which type of image did So-Young used most often?

Content Appeal

Advertising appeal is an approach to draw consumers' attention and a strategy that persuades people to make purchasing decisions based on their feelings about the brand or the product. In general, there are two categories of advertising appeal: rational and emotional. Rational appeals are synonymous with informational appeals. Such appeals emphasize the features or attributes of products, service, or brands. Using a rational appeal is trying to meet the customers' needs from a functional or utilitarian perspective. On the other hand, many consumer decisions are made based on emotional feelings toward a product or brand. Emotional appeal focuses on consumers' social and psychological needs (Belch & Belch, 2012).

Existing research supports that, many cosmetic surgery advertisements adopt rational appeals such as information about clinic's location, environment, and services offered. On the

other hand, cosmetic surgery is often portrayed as a way to improve appearance and to enhance one's opportunities for success socially and economically (Sullivan, 2001). Emotional appeals evoke consumers' feelings about cosmetic surgery.

RQ4: Which content appeal is more prevalent informative, entertainment, or a combination of the two?

CHAPTER THREE: METHOD

The methodology used in this research study was latent content analysis, which generalizes communication contents or reduce phenomena into categories, which helps people understand the relationships among the categories (Kassarjian, 1977; Riffe, Lacy, & Fico, 2014). Content analysis has been widely used in many fields such as political propaganda, journalism, marketing, and mass communication. This method has been adopted to identify the marketing strategies, advertising campaigns and consumer behaviors through classifying different advertising elements or information, for example, health-related advertisements from alcohol, tobacco, prescription drug (Morgenstern, et al., 2015; Sterling, Fryer, Majeed, & Duong, 2015; Macias & Lewis, 2003).

Sampling

WeChat is one of the most powerful Chinese social media platforms. It is a preferred channel for many business accounts to advertise their brand or products. Third-party companies are also heavy users of WeChat; however, third party companies use of WeChat has received little research attention. This is especially true for posts released under subscription accounts that have high frequency characteristics (maximum once a day) and multiple articles (maximum eight articles).

The sample used in this study was comprised of articles selected from So-Young's official WeChat account (WeChat ID: soyoun111) daily post. So-Young's first WeChat post was in mid-2014. To ensure the probability that posts from each month had an equal opportunity to be chosen, systematic random sampling was used to choose a total of 60 days between the

five-year period between January 2015 and December 2019. The 60 days were chosen through a random calendar date generator from Random.org. All selected dates are listed in Table 1.

Data were aggregated and downloaded from Newrank.cn, which is an online content collecting service platform that keeps all the WeChat official accounts' posts and relevant data. According to the selected dates, the corresponding data were selected and further analyzed. Due to the limitation from WeChat platform operating requirements, the subscription account can publish a daily post with maximum eight articles simultaneously. A total of 267 posts were captured. The length of articles was not a controlled variable in this study. The URL or the HTML of each article was saved.

Beginning in June 2020, WeChat began offering both “like” and “wow” function for users to engage with their content. However, during 2015 through 2019, WeChat only provided one function at a time: “like” between 2015 to 2018, and “wow” for 2019. In this pilot study both “like” and “wow” are treated as engaging activity. The number of “likes” and “wows” that an article received was used to measure if there was a constructive relationship between the total number of elements an article contained and the engagement from readers, and to analyze which type of content appeal most often engaged readers.

This study mainly focused on two kinds of advertising appeals: rational appeal, which was defined as informative, and an emotional appeal is defined as entertainment. Content is considered an informative appeal if over 50% of its information relates to the brand or product. If more than half of the content is not related to brand or product information, it is labeled entertainment. Similar to the heuristic model, both an informative and entertainment appeals might be presented.

Compared with current posts, fewer articles were posted in the early years and those articles were shorter. All 267 post were examined to gain a more thorough understanding of So-Young's advertising strategy.

Table 1. Dates of Samples Choosing

Dates of Samples Choosing												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2015	23	2	19	24	19	9	14	24	14	19	26	31
2016	24	21	24	10	10	27	22	27	15	17	22	28
2017	11	9	7	29	14	19	27	16	18	6	17	12
2018	12	8	25	4	22	24	13	6	2	9	27	14
2019	3	17	10	17	23	26	21	31	28	22	24	4

Coding Procedure and Inter-Coder Reliability

A graduate student was recruited to establish intercoder reliability. A coding training session was held to provide a detailed explanation of the coding sheet to help coders become familiar with the coding content. In the training session, one day in 2020 was randomly selected and the posted articles from that day were analyzed as guidance for reading articles and completing coding sheet.

Before coding the sample, a pre-test was conducted to determine if there existed any problematic variables in the coding sheet. Cohen's kappa (Cohen, 1960) was used to compare the agreement of seven categories and 37 items. The total sample included 267 articles chosen from 60 random days of the five-year review period. The inter-coder reliability pre-test was randomly selected and included five days and 28 articles, which represented slightly more than 10% of the total sample.

The inter-coder reliability measures ranged from 0.63 to 1.00. The coders achieved excellent agreement on 23 items, where the kappa value is larger than 0.8. Substantial agreement

was reached on seven items: “news” (0.65) and “others” (0.78) options under element hook, “aesthetics” (0.78) under beauty framing element, “offering promotion or interactive events” (0.71) under the overt ad element, and three items such as “no beauty related images” (0.63), “before and after photos” (0.70), and “contrast photos of celebrities/social influencers” (0.71). Because the pre-test sample size was not large enough, the remaining seven items do not have a kappa value. However, the coders reached 100% agreement on these items.

Table 2. Inter-coder Reliability – Cohen’s Kappa

	Items	Cohen’s Kappa Value	Percentage of agreement
Hook			
0	This element does not include in the article	.87	
1	Gossip	.92	
2	Entertainment programs	1.00	
3	Movie/Drama review	.87	
4	Introduction about celebrity or social influencers	.84	
5	News	.65	
6	Patient’s diary or experience about cosmetic surgery	N/A	100
7	Others	.78	
Beauty Framing			
0	This element does not include in the article	.90	
1	Aesthetics	.78	
2	Physical appearance and/or body image	.84	
3	Temperament	1.00	
4	Others	N/A	100
Solutions			
0	This element does not include in the article	.86	
1	Through conducting cosmetic surgery	.81	
2	Through conducting non-cosmetic surgery	.81	
3	Through conducting both ways	N/A	100
4	Others	N/A	100
Overt AD			
0	This element does not include in the article	.85	
1	Providing product information	1.00	
2	Offering promotions or interactive events	.71	
3	Clinic or physician’s information	N/A	100
4	Others	1.00	

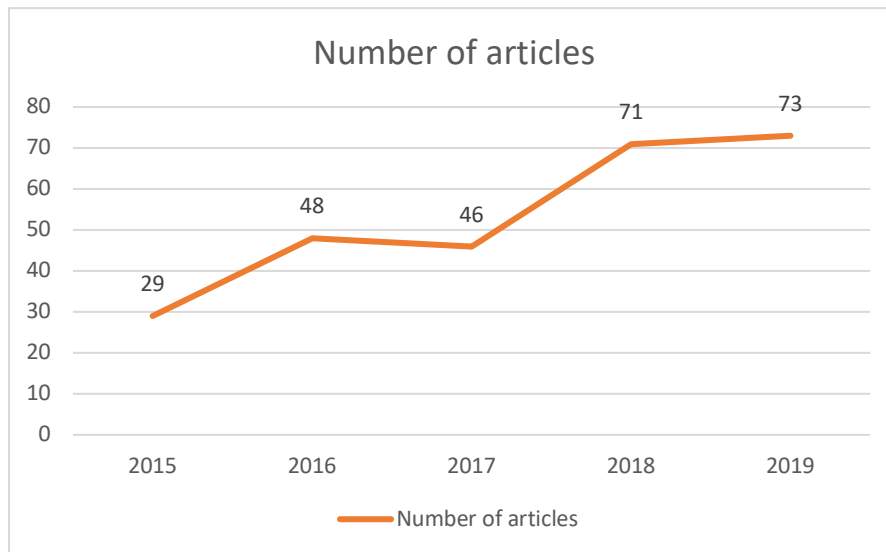
Table 2 (cont'd)

Human Figure			
0	There is no human figure in the article	1.00	
1	Celebrities and/or social influencers	.93	
2	Non-celebrities	1.00	
3	Both celebrities and non-celebrities	.92	
Image			
0	There is no beauty related image in the article	.63	
1	Before-and-after photos	.70	
2	Contrast photos of celebrities/ social influencers	.71	
3	Scientific explanatory drawing	1.00	
4	Stills, snapshots and/ or events photos	1.00	
5	Photos of physician	N/A	100
6	Others	N/A	100
Appeal			
1	Informative	.87	
2	Entertainment	.86	
3	Combination of informative and entertainment appeal	.92	

CHAPTER FOUR: RESULTS

Sixty days were randomly selected between 2015 to 2019, resulting in 267 articles: 29 (10.9%) from 2015; 48 (18.0%) from 2016; 46 (17.2%) from 2017; 71 (26.6%) from 2018; and 73 (27.3%) from 2019. The number of articles increased each year. As seen in Figure 2, substantial increases occurred between 2015 to 2016 and between 2017 to 2018. The number of articles featured from 2016 to 2017 and from 2018 to 2019 were relatively stable. A number of factors contributed to the annual increase of articles. WeChat users and So-Young WeChat account followers increased during the timeframe examined in this study. Additionally, there was rapid development in both the social media and of cosmetic surgery marketplaces.

Figure 2. Distribution of So-Young's WeChat posts between 2015 to 2019



Statistical Analysis Plan

Frequencies were run to obtain a better understanding of the article characteristics, which included four element categories, image types, and the content appeal. Descriptive statistics were run from the dataset to determine frequencies. The independent variables used in the analysis

were number of elements, the categories under each element respectively, different types of images, and the articles' content appeal. All independent variables were categorical variables that received a non-negative integer, such as 0, 1, 2, etc. A generalized linear model (GLM) was the model chosen to collected data.

The study dependent variables were the engagement numbers, i.e., “likes” and “wows” chosen by readers. In order to analyze the relationships among multiple different independent variables regarding reader's engagement, statistical analysis software SPSS version 26 was used for descriptive and regression analyses. The distribution frequency of engagement was first tested, revealing a right skewed curve. Meanwhile, the standard deviation was larger than the mean number, which also indicated the data were overly dispersed. Therefore, negative binominal with a log link function was adopted for running the GLM tests. Additionally, it was logically deduced that an article might receive a higher engagement number if it was read by more WeChat users, so the number of readings was considered as a covariate (control) variable. To gain a more clear picture of how different independent variables engaged WeChat readers, parameter estimates and pairwise comparisons tests were used to develop an understand of the relationships between them. Generally, if the independent variable significantly engaged readers, it would be observed through the parameter estimates. In addition, pairwise comparison helps to identify relationships among each independent variable. In this study, pairwise comparison was used to determine which element category had higher reader engagement levels. Number of elements, and content appeal were also tested using pairwise comparison (all the results are attached under Appendix G).

Research Question 1 & 2

Four elements. Four elements were observed in the So-Young articles: one) hook; two) beauty framing (problem raising); three) solution; and four) overt ad. In order to address the first research question, the number of elements an article contained was used as the first dependent variable. Results showed that 82 (30.7%) articles contained one element; 67 (25.1%) articles contained two elements; 83 (31.1%) articles contained three elements; and 35 (13.1%) articles contained all four elements. The GLM was statistically significant ($p < .001$), and the test showed the articles containing only one element or two elements have a statistically significant ($p < .001$) higher engagement number (estimated coefficients of 0.934 and 1.036, respectively) compared with articles that contain all four elements, the reference category. Moreover, articles that contained one or two elements received greater engagement than articles that included three or four elements ($p < .001$). However, there is no significant difference between one and two elements ($p = 0.543$) or between three and four elements ($p = 0.116$).

The heuristic-systematic model proposed that more arguments used were treated as more useful and effective, and the research question was trying to testify if a single element or multiple elements would engage more readers. It's interesting to note that the result shows that a post containing fewer elements would lead to a higher engagement. End users spent more time with articles that presented fewer arguments.

Table 3. Frequency of four elements appeared in the sample size

	One Element	Two Elements	Three Elements	Four Elements
Total Number	82	67	83	35
Percent	30.7%	25.1%	31.1%	13.1%

Hook element. From 2015 to 2019, each year So-Young posted more articles that contained hooks, compared with articles that did not include any hook. During the five years examined, 56 articles (21%) did not include a hook; while 211 articles (79%) did contain a hook (Figure 3). With the exception of 2016 and 2017, which had the same number of articles that contained a hook, there was a rapid increase in the number of articles that contained hooks from year to year, i.e., 2015-2016, 2017-2018, and 2018-2019. When taking a closer look at each hook category, content related to celebrities or social influencers was used most often, such as gossip (20.6%), entertainment programs (17.6%), movie or drama (9.4%), and career path or introduction about them (10.1%). Only a small percentage of articles focused on current news (3.4%) and patients' cosmetic surgery experiences (4.9%). Thirteen percent of the total articles included a hook other than the categories listed above (Table 4 & Figure 4).

“Celebrity gossip” was the element most widely used during the five-year period examined. Specifically, more than 20% of the articles featured this topic. A generalized linear model was run with the hook element, number of engagements, and reading numbers. The model results were significant ($p < .001$). Articles that did not include a hook element ($p < .05$) or had a “movie/drama review” hook ($p < .05$) had a statistically significantly higher engagement number (estimated coefficient of .487 and .643, respectively). Moreover, the pairwise comparison showed that both hook types (place types in parentheses) had a significantly higher engagement number than the articles using the hook about “introduction of celebrities/social influencers or their career path” and “other” respectively. There was no significant difference among the remaining categories.

Figure 3. Distribution of So-Young's WeChat posts that included hook element between 2015 to 2019

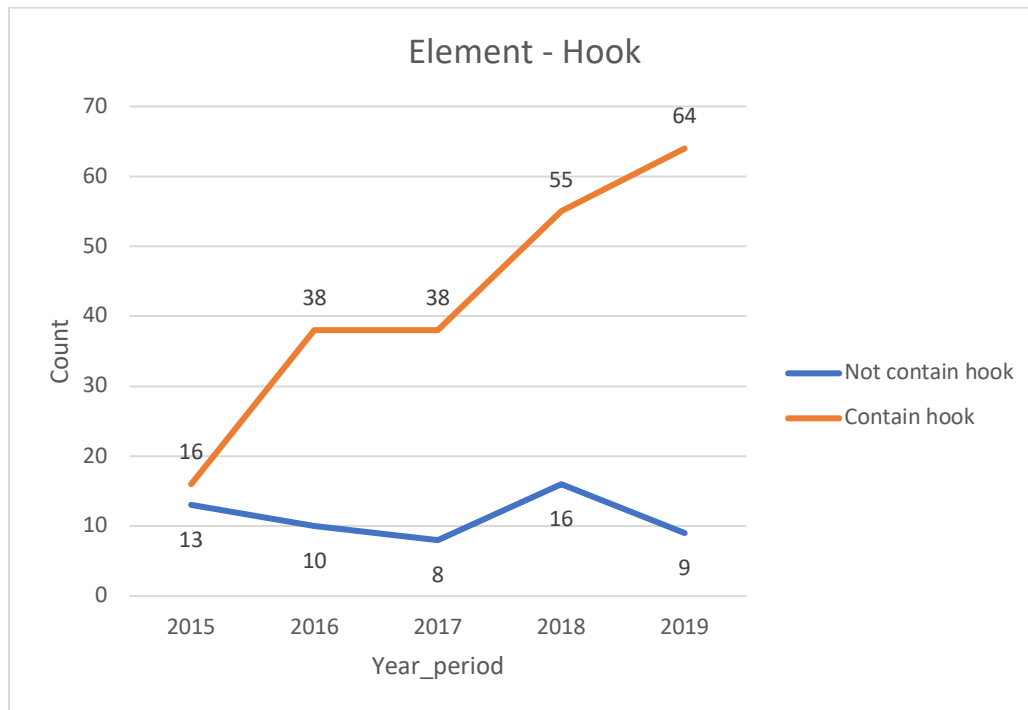
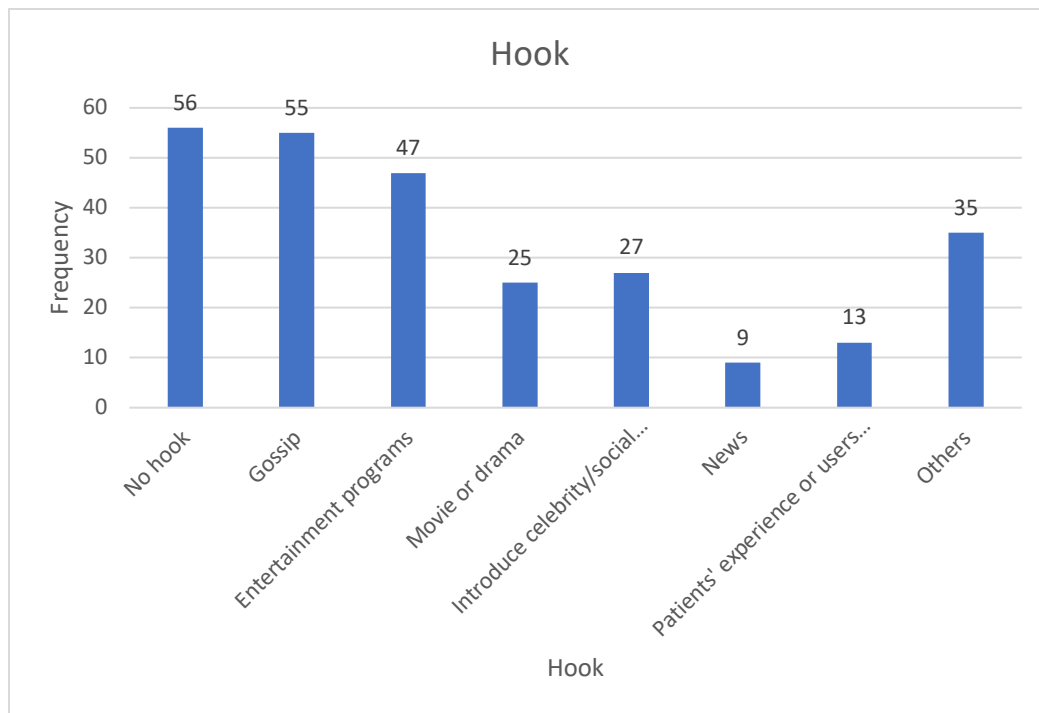


Figure 4. Frequency of each categories under hook element appeared in So-Young's WeChat posts between 2015 to 2019



Beauty framing element. The beauty framing element of also appeared in 183 articles, approximately 68% of the total. Although there was a slight decrease between year 2016-2017, the other time periods experienced a notable increase (Figure 5). Although there were 84 articles (31.5%) that did not contain a beauty framing element, more than two thirds of the samples did. The topic of physical appearance and body image appeared most often in 167 articles (62.5%). In comparison, the percentage of articles containing the topics of aesthetics or temperament were quite small, 4.1% (11 articles) and 1.9% (5 articles), respectively (Table 4 & Figure 6). Surprisingly, the articles that did not include a beauty framing element had a significant higher engagement number than “aesthetics” content ($p = .001$), “physical appearance/body image” ($p < .01$), and “temperament” ($p < .001$). “Physical appearance/body image” also had a significantly higher engagement number compared with “temperament” ($p < .05$).

Figure 5. Distribution of So-Young's WeChat posts that included beauty framing element between 2015 to 2019

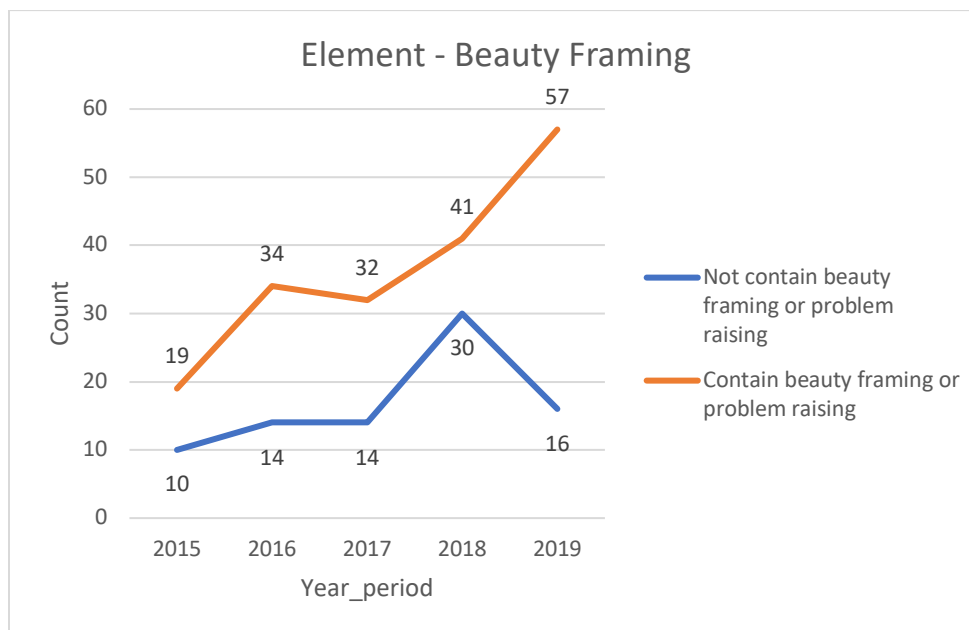
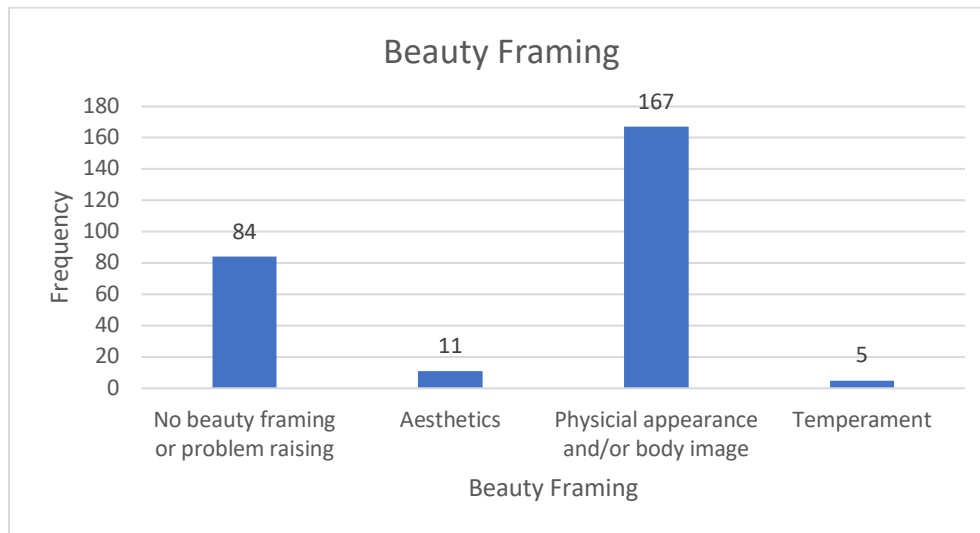


Figure 6. Frequency of each categories under beauty framing element appeared in So-Young's WeChat posts between 2015 to 2019



Solutions element. Unlike the previous two elements, hook and beauty framing, the solution element appeared in half of the sample. However, the percentage of articles that contained this element steadily decreased after 2016 (Figure 7). The solutions focused primarily on cosmetic surgery, non-cosmetic surgery, or both. Having cosmetic surgery (26.6%) was the solution mentioned most often, followed by non-cosmetic surgery (21%). There were only three articles that recommended cosmetic and non-cosmetic options to become more attractive (Table 4 & Figure 8). Again, the results revealed that articles that did not include the solution element received a higher engagement number, when compared with the other three solution types ($p < .01$); however, there was no significant differences among the three categories.

Figure 7. Distribution of So-Young's WeChat posts that included solution element between 2015 to 2019

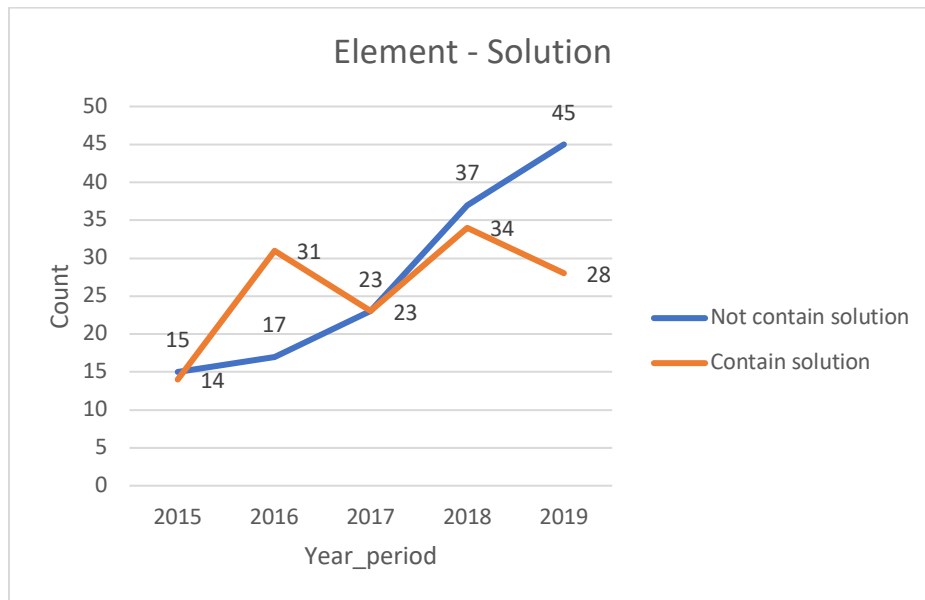
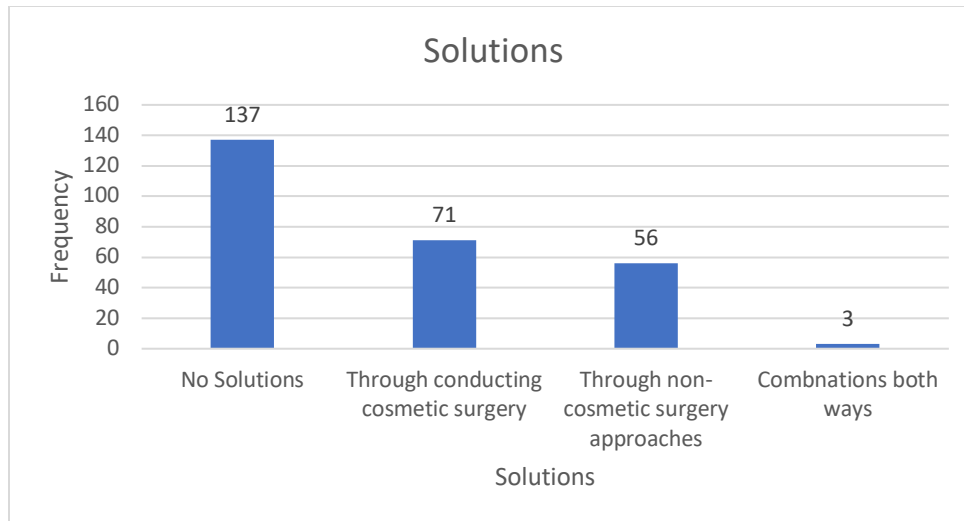


Figure 8. Frequency of each categories under solution element appeared in So-Young's WeChat posts between 2015 to 2019



Overt ad element. The last element is overt ad. Figure 9 illuminates that few articles contained overt ads. Overt advertisements were used more often during the earlier years. Among the total number of the yearly sample, the percentage of articles that contained overt ads were fairly high in the early years, the numbers reached 62.1% and 37.5% respectively. The

proportion of overt advertisements in both 2017 and 2018 decreased noticeably, 21.7% and 19.7%, respectively. The downward trend ended in 2019. So-Young promotion and interactive events (16.1%) were used most often, followed by the product information (11.6%) and clinic or physician information (2.6%) (Table 5 & Figure 10). The model results were significant ($p < .01$). Articles that did not include overt ads experienced higher engagement ($p < .05$). In addition, content about “product information” and “promotions and interactive events held by So-Young” received higher engagement than advertisements about “clinic/physician information”.

Figure 9. Amount distribution of So-Young's WeChat posts that included overt AD element between 2015 to 2019

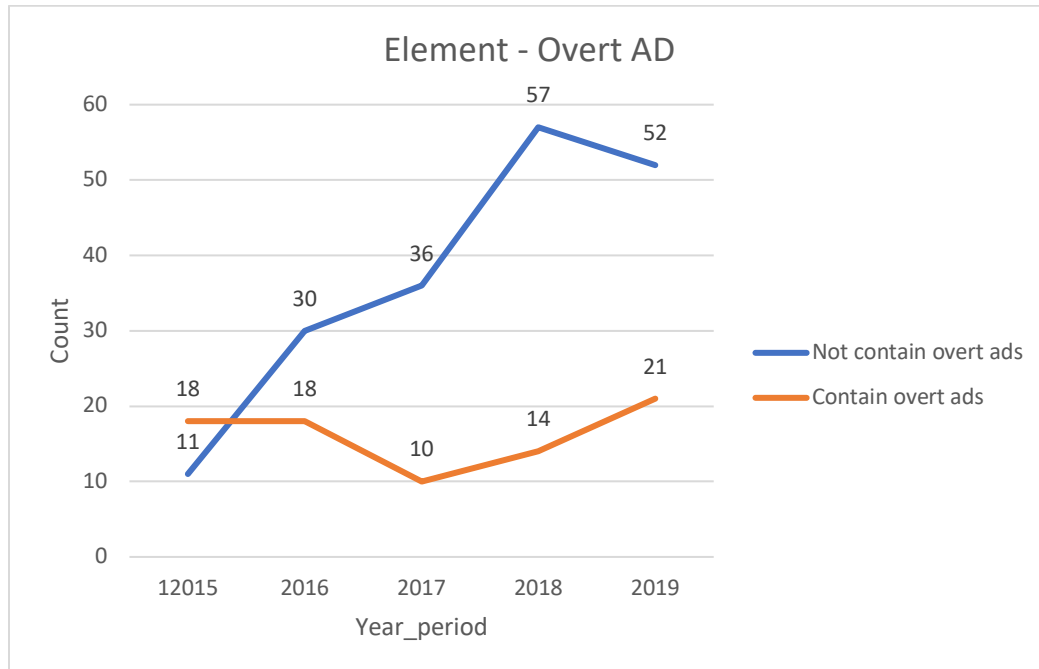
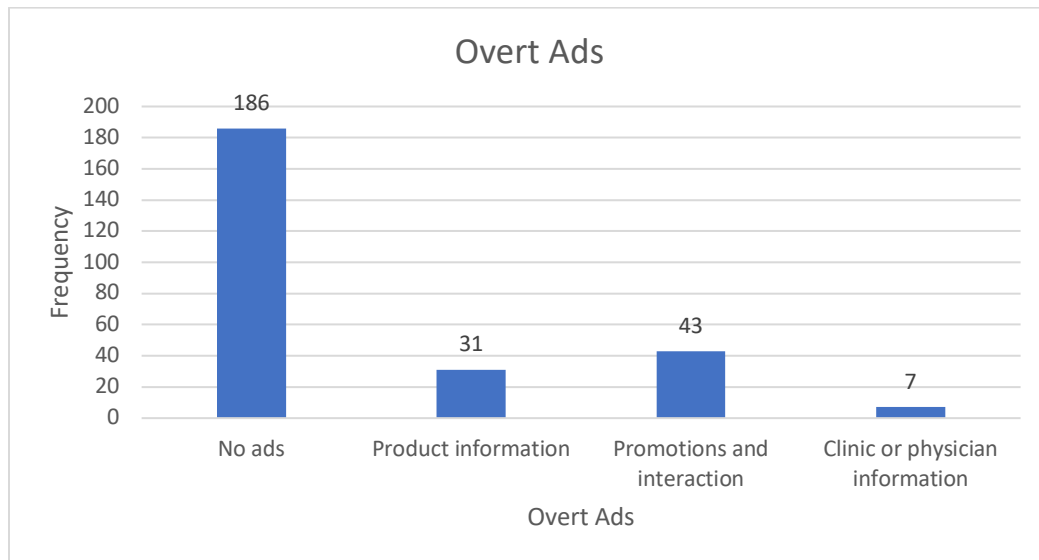


Figure 10. Frequency of each categories under overt AD element appeared in So-Young's WeChat posts between 2015 to 2019



Research Question 3

Image. Between 2015 and 2019, a solid majority of articles, 95.5%, contained human figures. A total of 163 articles (61.0%) featured celebrities/social influencers and 34 articles (12.7%) featured non-celebrity figures. The remaining 58 articles (21.7%) included images of both celebrities and non-celebrities (Table 4). Overall, over 80% of the articles relied on celebrities to attract readers.

In some articles, So-Young used several types of beauty images, such as before-and-after photos and contrast photos. Specifically, there were 225 articles using celebrities/social influencers' fashion stills or snapshots, which represented almost 85% of the total sample, followed by contrast photos of celebrities (28.1%), scientific explanatory drawing (22.5%), before-and-after photos (19.1%), photos of physicians (4.1%), and other images (2.2%).

The results provide evidence that So-Young predominately featured celebrity images, which focused on their physical appearance/body image and an implicit link to materialism and

success. In comparison, images most easily associated with cosmetic surgery appeared less in the articles. Before-and-after photos were not featured in one fifth of total sample. Simply put, So-Young did not directly advertise cosmetic surgery, instead, it placed emphasis on shaping readers' perceptions of the ideal body image and material success.

Research Question 4

Content appeal. Articles were classified into one of three appeals: informative, entertainment, and a combination of informative and entertainment. The major difference between the informative and entertainment appeal was if the content focused on cosmetic surgery or relevant beauty information. Informative appeal was defined by content that contained information of beauty or facts about the attributes of a brand, product or service. The content featured in entertainment appeal generally focused on an individual's story, i.e., career or romance. Nearly half of the total sample used entertainment appeal (47.9%), followed by informative appeal (35.6%) and a combination of both (16.5%). Omnibus testing revealed statistically significant results (Chi-Square = 359.258, $df = 4$, $p < .001$). There was a statistically significant difference ($p < .001$, estimated coefficients of 0.395) regarding how often the entertainment appeal was used compared with the information and combination appeals. But there was no significant difference between informative appeal and entertainment appeal ($p = 0.368$), informative appeal and combination appeal ($p = 0.155$). Based on this result, the entertainment content that So-Young posted on WeChat was engaged with most by end users. Readers found articles that contained informative content less engaging.

Figure 11. Distribution of So-Young's WeChat posts that contained different content appeal between 2015 to 2019

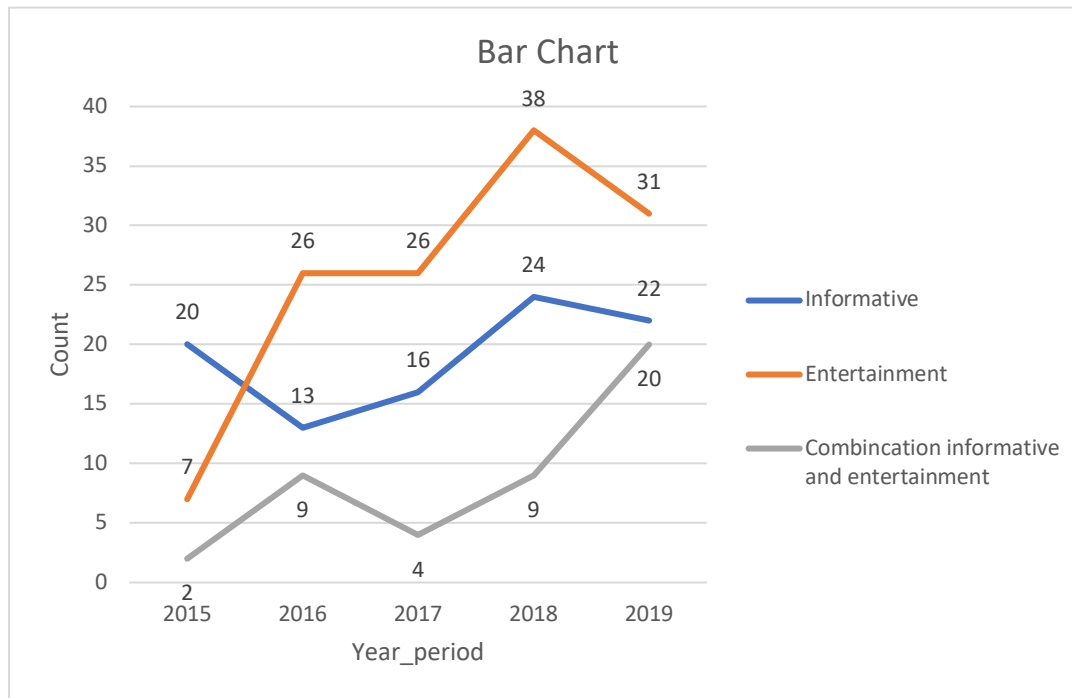


Table 4. Frequency of each categories appeared in So-Young's WeChat posts between 2015 to 2019

	2015	2016	2017	2018	2019	Total	Percentage of presence in 267 articles
Hook Element							
No hook	13	10	8	16	9	56	21.0%
Gossip	3	13	10	16	13	55	20.6%
Entertainment programs	1	10	9	8	19	47	17.6%
Movie or drama	1	3	3	8	10	25	9.4%
Introduce celebrity/social influencers or their career	1	3	6	6	11	27	10.1%
News	1	0	3	2	3	9	3.4%
Patients' experience or users' appearance analysis	4	4	3	1	1	13	4.9%
Others	5	5	4	14	7	35	13.1%

Table 4 (cont'd)

Beauty Framing Element							
No beauty framing or problem raising	10	14	14	30	16	84	31.5%
Aesthetics	0	4	1	2	4	11	4.1%
Physical appearance and/or body image	19	30	29	37	52	167	62.5%
Temperament	0	0	2	2	1	5	1.9%
Solution Element							
No Solutions	15	17	23	37	45	137	51.3%
Through conducting cosmetic surgery	12	23	13	16	7	71	26.6%
Through non-cosmetic surgery approaches	2	7	10	17	20	56	21.0%
Combinations of both solutions	0	1	0	1	1	3	1.1%
Overt Ad Element							
No ads	11	30	36	57	52	186	69.7%
Product information	5	1	7	12	6	31	11.6%
Promotions and interaction	12	13	2	1	15	43	16.1%
Clinic or physician information	1	4	1	1	0	7	2.6%
Human Figures							
No human image	7	2	0	3	0	12	4.5%
Celebrities or social influencers	6	33	29	48	47	163	61.0%
Non-celebrities	11	6	3	4	10	34	12.7%
Both celebrities and non-celebrities	5	7	14	16	16	58	21.7%
Beauty Related Images							
No beauty related image	6	2	2	4	1	15	5.6%
Before-and-after photos	10	11	10	9	11	51	19.1%
Contrast photos	4	20	15	20	16	75	28.1%
Scientific explanatory drawing	6	6	12	18	18	60	22.5%
Stills, snapshots and/ or events photos	15	40	44	62	64	225	84.3%
Photos of physician	4	5	2	0	0	11	4.1%
Others	0	0	0	0	6	6	2.2%

Table 4 (cont'd)

Content Appeal							
Informative	20	13	16	24	22	95	35.6%
Entertainment	7	26	26	38	31	128	47.9%
Combination of informative and entertainment	2	9	4	9	20	44	16.5%
Total Number of Articles	29	48	46	71	73	267	100.0%

CHAPTER FIVE: DISCUSSION

This pilot study explores advertising strategies employed by So-Young International on the Chinese social media platform WeChat. The study provides insights to how WeChat posts are actively being used by medical aesthetic service providers as an engaging platform, to raise people's interests and shape their attitude toward cosmetic surgery. Instead of directly promoting cosmetic surgery, So-Young uses daily articles that cover a range of issues and topics, to consistently promulgate a message that "appearance is power". This can also be seen as a form of covert advertising, where social media platforms such as WeChat provide advantageous condition for businesses to conceal their selling intention through tailored content.

A core value centered on elevating the importance of body image and physical appearance can be observed from a majority of content published by So-Young. Since the process of cosmetic surgery is irreversible in nature, decision should always be made with caution. This is especially the case for vulnerable populations such as adolescents, who may be easily influenced by mass media while not being fully aware of the consequences accompanying such procedures.

Combined with systematic analysis and knowledge from previous literature (Berg, 2001; Babbie, 2014; Zhang & Wildemuth, 2016), four primary elements emerged in the So-Young articles: "hook", "beauty framing", "solution" and "overt ad." Each element had a different function. The hook element generally used different topics or issues to attract readers. The post always provides a specific angle to define beauty, ranging from physical appearance to aesthetics and temperament. Solutions mainly describes the approaches introduced in articles that can help to achieve the beauty, like conducting cosmetic surgeries or make up. Any direct information posted in articles that was related to products, brand promotions or clinic was treated as an overt ad element.

Although So-Young's posts involve a variety of different topics, at least one of the four elements was found in every article examined. Sometimes a combination of the four were presented together in one article. An interesting statistically significant finding was that the fewer elements provided, the more users engage with the content. The result verifies that the number of elements in an article has an impact on readers' engagement in posts. It also effectively supports that the addition of more elements does not necessarily encourage readers to process provided information. In contrast, WeChat users more often retrieve information from the posts when the content was more focused. Simply put, articles that had a simple structure or fewer elements were more engaging for WeChat users. However, the heuristic-systematic model proposed that the use of more arguments was treated as more useful and effective. But receiving a cosmetic surgery is an irreversible process, which should involve an in-depth consideration and rather comprehensive information gathering. In which, the decision should be made through the systematic route instead of a heuristic one. This contrasts the information provided from So-Young's articles.

The data was collected from 267 articles during the five-year period. The hook element was the most popular, appearing in 211 articles, followed by "beauty framing" (183), "solutions" (130) and "overt ad" (81). Although the category of gossip information was mostly used as a hook element in articles, the element category did not have a statistically significant relationship with the engagement number. Simply put, WeChat users are not particularly engaged with articles that mainly feature gossip content. In contrast, articles with hook that relied on movie and drama reviews accounted for only 9.4% of the sample articles, was often more engaging and had a statistically significant relationship. A number of reasons may explain this pattern. First, in articles that feature gossip, specific celebrities are usually the hook, which may be of little

interest to people who don't follow celebrities. Second, the findings revealed by movies and drama reviews can be partially explained by the article contents, which feature either classical movies or currently trending shows. Due to the exposure over the years, classical movies are more likely to resonate with a larger number of readers, and lead to higher engagement with the articles. In addition, movies or dramas discussed in article posts that are currently trending generally have self-contained traffic, which might also attract many popular readers. Articles covering celebrities from movies or dramas attract interests from various groups of readers, including regular readers, followers of the movies or shows, and celebrity fans.

Within the second element of Beauty Framing, physical appearance and body image were featured most often, although the statistical analysis did not reveal a significant relationship between the beauty framing approach and the engagement number. The pairwise comparison revealed that readers engaged more with the “physical appearance/body image” than with temperament. Regarding article content, several speculations can be provided to further explain the pattern revealed by the dataset. First, articles oriented around aesthetics generally contain information ranging from art, culture, history, and sometimes extend into architecture and design. The topics become much more specialized compared with articles oriented around physical appearance and body image. The articles have more rational and academic information content, which in turn, could be less emotionally provoking to readers. Secondly, articles that discuss temperament, one of the categories under beauty framing element, are often centered around topics such as fashion and dress up. The characters of temperament present in articles are often times vague and implicit. For instance, definitions for vintage or chic can vary among individuals and change over time, which can make it difficult to evoke a strong connection from readers. Third, the number of articles that contain aesthetics or temperament are limited in this

study, which may not provide sufficient data to develop statistically significant relationship with engagement number.

For the solutions element, descriptive and statistical analysis results provide some interesting insights. Although mentions of cosmetic surgery in articles were the most prevalent, the use/call out of non-cosmetic solutions such as make-up, fitness, and utilization of external temporary strategies to change physical appearance was featured slightly less often than cosmetic surgery. Meanwhile, the only approach that has a significant relationship with the engagement number were articles that did not contain a solution, which indicates having neither a cosmetic nor non-cosmetic solution engaged readers effectively. Articles that do not make mentions of solutions are in fact more engaging to readers. This pattern can be explained by drawing a connection from studies addressed in the literature review. Articles posted by So-Young on WeChat can be best characterized as a content marketing strategy, a form of covert advertising. By not identifying the articles as advertisements, they markedly conceal their selling intention and reduce readers' ability to recognize the presented materials as ads. However, once there is an appearance of overt advertising elements, a sense of resistance from readers is automatically triggered, which lowers the persuasiveness of the content. Readers might intuitively make a connection between solutions and products featured by So-Young. Therefore, it is possible that people were less likely to engage with articles that describe or offer cosmetic or non-cosmetic solutions.

For the last element, overt ad shares a similar pattern with other elements where articles that do not contain overt ads had the highest number of engagements. This result can also be explained by the defense mechanism of consumers when detecting the selling intention in native advertising. Similar to solutions, readers will be less likely to engage if an overt ad appears in the

article that is obviously promoting services or products. However, from the pairwise comparison analysis, it is interesting that articles that had overt ad for “product information” or “promotions and interactive events” received higher engagement than advertisements that feature “clinic/physician’s information”. One potential explanation for this is that So-Young usually offers discounts or promotional services in articles that feature products or events, but for articles that highlight a certain clinic or physician, there generally are no promotional services associated. Interestingly, the “overt ad” element had a stable presence during the five-year period examined. However, So-Young decreased the overall proportion of overt ads, even as the total number of articles has greatly increased year by year. It could be seen as an embodiment of So-Young’s covert advertising strategy: using less overt ad information to weaken readers’ recognition toward their persuasion intention and increase audiences’ trust or interest with So-Young WeChat posts.

The other main component used by So-Young was images. Nearly all articles posted on the WeChat official account employ large numbers of images as visual illustration. As discussed previously by regarding heuristic-systematic model, systematic or textual information generally requires cognitive comprehension of content, whereas heuristic processing refers to information gained passively without intense cognitive processing. In articles posted by So-Young, the general pattern consists of heavy utilization of images which can be considered as cues for heuristic information processing. When coupled with contents such as celebrities and endorsers, they reinforce the credibility of information and lead to higher agreement by readers. In addition, about 85% of articles contain images of celebrities. As previously suggested by social comparison theory, upward comparison takes place when people make a comparison by viewing attractive images of celebrities and models, which often becomes a motivation for self-

improvement. This strategy, although not clearly stated, is precisely utilized by So-Young in most of their articles. It effectively engages readers by presenting celebrities who possess a desirable physical appearance, and encouraging readers to engage in self-improvement to reach same results achieved by celebrities. The articles then direct readers to cosmetic or non-cosmetic surgery approaches for self-improvement, which may increase readers desire for cosmetic or non-cosmetic surgery approaches to enhance their physical beauty.

For the findings related to content appeal, statistical analysis indicated that articles with entertainment content engage readers significantly more than articles containing informative content. Entertainment content generally proceeds with movie and drama, gossip or career paths of celebrities and social influencers. Similar to heuristic processing, these contents tend to be easily digested by readers without an intense cognitive effort. In contrast, informative contents are generally associated with medical information or cosmetic solutions. People who have interests in the information, however, may be less likely to click “wow” or “like” for the articles. As cosmetic solutions are still negatively perceived in Chinese society, engaging with articles may expose their interest in having cosmetic surgeries and result in being judged by their social groups. However, this would be a tentative claim learned by solely examining which kind of article’s content would engage readers more and may not represent the actual opinions from readers. It will be worthy to conduct survey or interview with real end users to know more accurate thoughts toward such content based cosmetic surgery advertising for the future research.

Implications

Most of the findings present in this research can be supported by the guiding theoretical framework previously established, such as the Social Comparison Theory and the Heuristic-

Systematic Model (HSM). During the research process, the study findings support that the promotion of body image is upheld as the main advertising strategy used in cosmetic surgery industries. The use of celebrity images is a strategy that So-Young uses to encourage readers to engage in upward comparisons, which could further increase audiences' self-dissatisfaction and their intention to receive a cosmetic surgery. In this pilot study, there are several findings indicate that readers processed the information through a heuristic route. For instance, readers were more engaged with articles that included fewer elements, and they engaged more with articles that contained entertainment appeal. However, making an irreversible decision like cosmetic surgery should involve a more systematic thinking process. Obviously, from the articles have been examined, they indicated So-Young tends to encourage readers to make emotional decisions instead of informed rational decisions. Evidently, So-Young rarely used post that provided meaningful information such as scientific explanatory drawings and physician photos.

In the practical application arena, the four-element model identified in the study can also be adapted to examine other companies' advertising strategies on WeChat. Due to the specific format required by the media platform rooted in cell phones, similar structures of composition can be observed from other industries that utilize WeChat official accounts for content marketing. The four-element model can be refined and applied to examine other covert advertising strategies used by other industries. This model can also be helpful for readers to understand the schemes of covert advertising common in WeChat. For instance, many online microlending businesses also launch advertising programs on WeChat that target younger individuals who lack credit history and have limited assets. These businesses launch advertisements to stimulate younger population's desire toward luxurious material life and to arouse their purchase intentions, instead of mentioning the consequences of amassing debt. Such

advertising encourages impulsive buying behavior and irresponsible spending habits which may have serious consequences for young adults. Unlike traditional covert ads that require disclosures for identification. Companies take advantage of the unique format and media channel available on WeChat's official accounts. Actual advertising materials are streamed and blended with other contextual information, making it harder for consumers to identify the underlying intention.

Limitations

As a pilot study, the nature of the content analysis approach is limited by the researcher's observation and knowledge from previous research studies. This study explores a pattern of schemes present in articles in conjunction with "likes" or "wows" as indicators for reader engagement. However, it does not truly represent the actual preference of readers toward the contents studied here. On the other hand, this study provides insight regarding certain categories that may engage readers. In addition, articles selected in the study were not controlled for the length of content, which may have potential bias for the level of engagement. During the selected period of study, articles on WeChat featured either "like" or "wow" as engagement indicators, this study did not differentiate the potential perceptual contrast between "like" and "wow". As the two indicators may trigger slightly different sharing circulation on WeChat, there may exist perceptual differentiation in weighting the indicators among WeChat users. Lastly, this study only examined content available on So-Young's WeChat official account. The results may also be unique to the WeChat ecosystem and may not apply to other social media platforms.

Future Study

A majority of the articles published by So-Young contain up to date information about trending celebrities. Data from a 2018 report on China's internet celebrity economy that studied age distribution of the fan population on Weibo has suggested about 10.1% of the fan population are between 13-18 years in age and 24.2% of population are between ages 19-22. The population below the age of 30 makes up 73.9% of overall fan population (iResearch, 2018). Because of the unique age character for fan culture, there could potentially be a large overlap of audiences on So-Young who were being targeted by contents of trending celebrities. Future study can certainly build on the foundation of this work to further examine: 1) the cognitive ability of young population in identifying covert content advertising, and 2) how the young population, including adolescents' attitudes toward cosmetic surgery, have changed as being shaped by content marketing strategies.

Future study can also build on the four-element model identified in the study to examine online content marketing from other industries launched on the WeChat platform. Although WeChat provides versatile marketing approaches for industries, there is still space that allows companies to circumvent advertising and marketing regulations. It is especially significant as WeChat is popular with all age groups. Future study could look into potential ways for regulation innovations on content marketing in digital media.

Conclusion

This study investigates the advertising strategies launched on WeChat by So-Young, one of the largest companies providing medical aesthetic services in China. Through an identification of So-Young's advertising patterns, this study's findings provide insights regarding different types

of content and visual elements launched on So-Young's WeChat media channel. This research helps to fill the gap in literature about cosmetic surgery advertisements launched on the Chinese social media platform WeChat. A model of content analysis method was developed for systematic examination of articles based on WeChat media channels. Through carefully identification of elements used in large number of medical aesthetic- related articles, this study provides new insights about how companies utilize covert advertisements to attract WeChat users. Due to the unique nature of cosmetic surgery and irreversible consequences accompanying such procedures, this research is also significant in providing potential means for users to recognize and become better informed regarding implicit content marketing strategies.

APPENDICES

APPENDIX A: History of Mass Media, Advertising and Cosmetic Surgery in China

Table 5. History of Mass Media, Advertising and Cosmetic Surgery in China

	Before 1940s	1940s	1949 - 1978	1978 - 2000	2000 - Present
Historical Big Issues	Thriving foreign trade between Western countries and China.	There were series of ongoing wars such as the Second Sino-Japanese War, and Chinese Civil War in mainland China. Times of national turmoil forced many Chinese displaced, and businesses were unavoidably shut down.	The People's Republic of China was established in 1949, and the Cultural Revolution swept the whole country.	China's reform and open-up policy came out lead to economic development and improvement of people's living standards.	China officially became one of the members of the World Trade Organization (WTO), and China also hosted a series of global events such as Beijing Olympic Games, Shanghai World Expo, etc.
Mass Media	Modern mass media channels like newspapers, magazines, and radio broadcasting has been imported.		The major purpose of mass media was political propaganda, and the industry reached the lowest valley that only 20 magazines and 42 newspapers were still published.	Mass media raised again that there already existed 382 newspapers, slightly more than 2000 magazines, and 38 radio stations in 1980. It had a rapid development in 1990s.	Chinese mass media grew by leaps and bounds. The market share of traditional media like magazines and newspapers were decreased, as digital media had a rapid advancement.
Advertising	First advertising industry boom appeared in China.		Commercial advertisements were faded out from the public view.	First TV Commercial Launched in 1979. With the increased liberalization and global communication in 1990s, the control on the Western advertising was easing.	Online advertising leapt to the greatest sector in China, and social media platforms become one of the most channels to launch advertising.
Beauty Standard & Cosmetic Surgery	Western women images like big eyes, double-fold eyelid, and plump figures were the temporal ideal images.		De-sexed, militarized, and masculine were the aesthetic figure. Meanwhile, People who tried to conduct cosmetic surgery for purpose of beauty were treated as bourgeois enemies associated with decadence to be assaulted and accused.	Cosmetics surgery as a scientific subject was greatly supported by Chinese government. An embryonic trend of cosmetic surgery advertising form in 1990s. Accompany with the transition of Chinese medicare system that the number of cosmetic surgery advertainments also increased.	Fashion magazines, newspapers, and especially tabloids, which enticed the urban middle class, were the major channels for placing cosmetic surgery advertising. Seductive and attractive women figures was popular and predominantly in printed ads. Many related advertisements and programs of cosmetic surgery were launched on TV and online channels.

APPENDIX B: Calendar Posters

Figure 12. Calendar poster (Yi, Liu, & Gan, 1995, p. 90)



Figure 13. Calendar posters (Yi, Liu, & Gan, 1995, p. 66)



APPENDIX C: Different Advertising Formats on WeChat Platform

Figure 14. Banner Ad in Official Account's Article

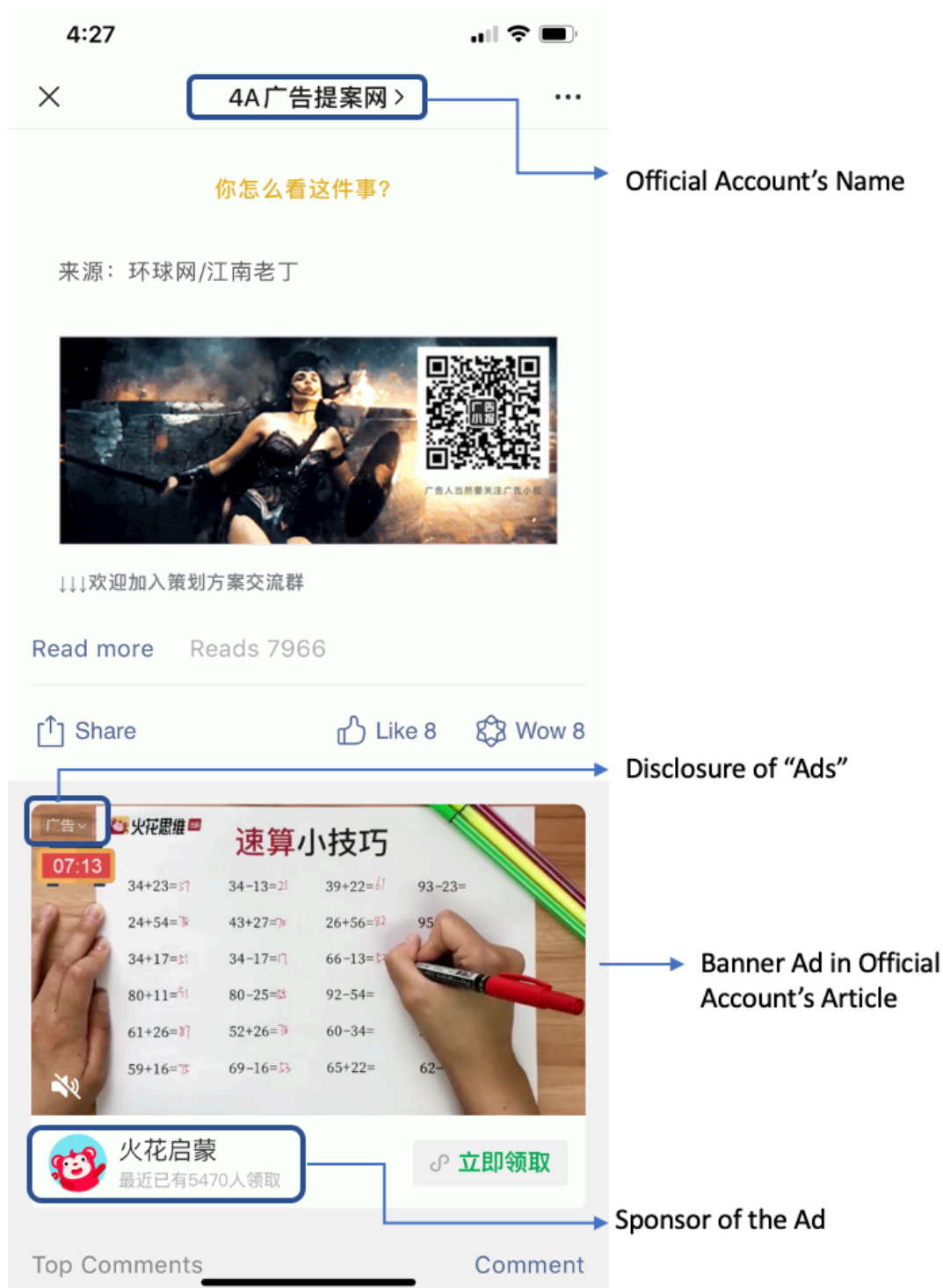


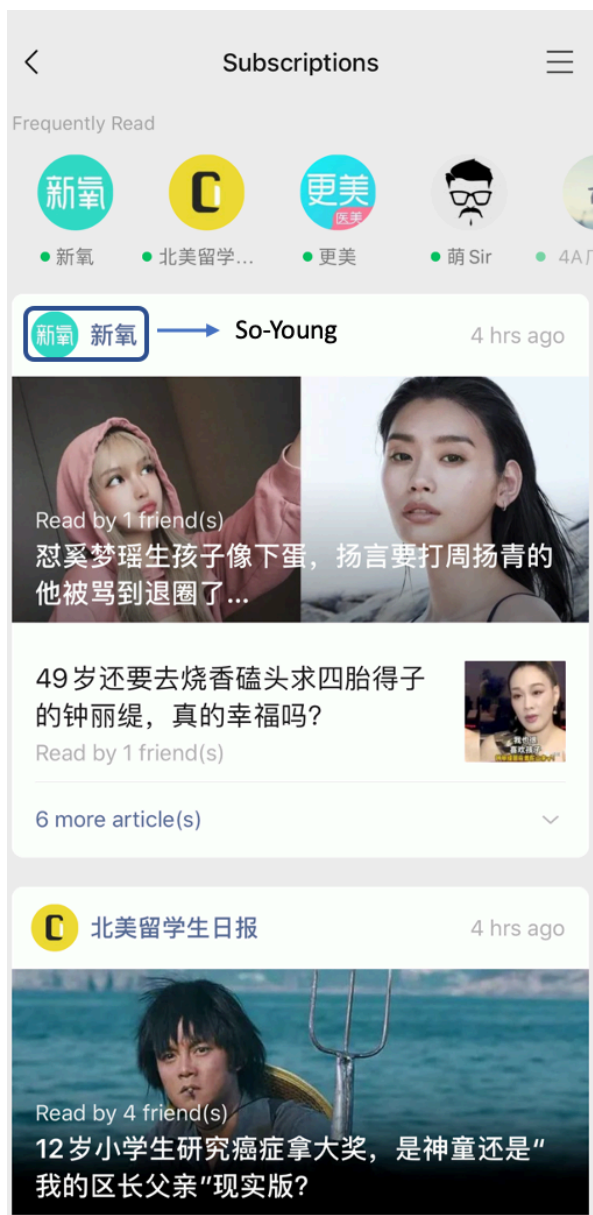
Figure 15. Banner Ad in Mini Program



Figure 16. Banner Ad in WeChat Moments



Figure 17. Subscription Account (Left Side) & Service Accounts Interface (Right Side)



APPENDIX D: Variable Definitions

Table 6. Variable Definitions

Variable Label	Conceptual Definition
	Operational Definition
Article Release Date	Date post first appeared
	Date listed at the beginning of the article and place in the order of Year-Month-Day
Article Position	Location among several posts occurring in a series
	Use date and rank order within the series between 1 and 8
Article Type	Original post or repost
	Original article is written by the main official account of So-Young (WeChat ID: soyoung111), and the repost articles are taken from the official accounts besides So-Young (WeChat ID: soyoung111)
Hook	Content used to entice reader to stay with post
	The category that appears in the first 30 seconds from the following: Gossip, Entertainment programs, Movie/drama review, Celebrity or social influencer introduction, News, Patient diaries/experience/appearance analysis, Other
Beauty Framing	Content that framed regarding the ideal beauty image or the sense of beauty
	The category that appears in article from the following: Aesthetics, Physical appearance and/or body image, Temperament, Other
Solution	Content focused on providing approaches to enhance physical appearance or beauty related issue
	The category that appears in article from the following: Cosmetic surgery, Non-cosmetic surgery, Combination of the two
Overt Ads	Content contained direct ads or promotions
	The category that appears in article from the following: Production information, Promotion or interactive events, Clinic or physician information, Other
Human Figures	Graphics that contain human figures in articles
	The category that appears in article from the following: No human figure, Celebrities, Non-celebrities, Combination of the two

Table 6 (cont'd)

Images	Pictures or photos presented in content
	The category that appears in article from the following: Before-and-after photos, Contrast photo of celebrity, Scientific explanatory drawing, Stills and/or events pictures, Photo of physician, Other
Content Appeal	The main type of content that articles deliver
	The category that appears in article from the following: Informative, Entertainment, The combination of the two

APPENDIX E: Protocol

Accompanying the rapid development of the cosmetic surgery industry in China, it is noteworthy that the customer base of cosmetic surgery is also getting younger. Mass media plays an important role in building idealized beauty standards, which affect adolescents' attitudes and intentions toward cosmetic surgery. With the development of digital media, people are under 24/7 exposure to many online advertisements. While brands, products or services can be sold, perspectives such as lifestyle, ideal beauty image or beauty value also can be framed through advertising. So-Young International Inc., as one of the cosmetic surgery "Yelp" platforms in China, already showed its considerable profitability and influence. Compared with traditional advertising, So-Young's performance on launching advertising on the social media channel WeChat is noteworthy. Both the average number of "reads" for each article and the total number of "likes" So-Young received in 2019, which reflected its leader status in the field and huge influence on WeChat users. Analyzing its posts will better help to understand its advertising strategy on WeChat. In this protocol, content categories which contain the definitions and examples are listed.

1. Release date of article: This variable refers to the actual date when the article was released, and it will be placed in the order of Year-Month-Day (e.g. 2020-05-05)
2. Release position of article in the post: This variable refers to the actual sequence of articles in the daily post (maximum 8 articles in daily post) update and will follow the order.
 - First place= 1
 - Second place= 2
 - Third place= 3
 - Fourth place= 4
 - Fifth place= 5
 - Sixth place= 6
 - Seventh place= 7
 - Eighth place= 8
3. Article Type: This variable refers to the creative/creation type of the content. The content could be classified as either original or repost. A original article is written by the main official account of So-Young (WeChat ID: soyoun9111), and the repost articles are taken from the sub official accounts of So-Young, such as "大人要脸" (WeChat ID: daren9aolian), "撸铁一姐" (WeChat ID: lutieyijie) and so on.
 - Original= 1
 - Repost= 2
4. Hook (element 1): This variable represents the entry point of the article, which identifies the general topic of the article.
 - None = 0
 - Gossip: Focus on celebrities, wealthy people's romance, marriage, scandal= 1
 - Entertainment programs: Could be the clips of the programs, the profile or performance of participators from the programs, such as "Sisters Who Make Waves" (乘风破浪的姐

姐), “Youth With You - Season 2” (青春有你 2). At meantime, it also includes fashion show, film festival and similar related programs = 2

Movie/Drama review: Include the plot introduction, character analysis, and related thoughts = 3

Career of celebrities or influencers: Include the introduction about celebrities/influencers, or their career path/working experiences = 4

News: Current hot issue (e.g. Fashion show, current news) = 5

Patients’ diary or experience about cosmetic surgery = 6

Other = 7

5. Beauty Framing/Problem raising (element 2): This variable shows the arguments related to ideal beauty image or proposed the problems that affect the sense of beauty

None = 0

Aesthetics: Focusing on knowledge about aesthetic principles = 1

Physical appearance and/or body image: Facial analysis or body size/posture = 2

Temperament: Indicates the attractive character such as classy, chic, elegant, neutral = 3

Other = 4

6. Solutions (element 3): This variable refers to the key to solve problems or the approach to ideal beauty

None = 0

Through conducting cosmetic surgery = 1

Through non-cosmetic surgery approaches, including beauty products, makeup and clothing = 2

Engage in fitness = 3

Other = 4

7. Overt ads or promotions (element 4): This variable shows if there are direct ads or promotions.

None = 0

Product information: Product or brand’s introduction that can be the name, benefits, functions, price = 1

Promotion or interactive events: Offer free trials, discounts, events participation, and free consultations = 2

Clinic or physician information = 3

Other = 4

8. Specific body part that needs to be improved: This variable helps to check if there are any particular body parts mentioned in the article.

None = 0

One or more = 1

- | | | | | | |
|---|-----------|--------------------------------|--------------------------------|----------------------|---------|
| a. Eyes | b. Nose | c. Ears | d. Mouth (Include Teeth, Lips) | e. Chin | |
| f. Arms | g. Breast | h. Back | i. Abdomen | j. Hip | k. Legs |
| l. Skin care (Whitening, wrinkle removal) | | m. Facial features (Face lift) | | | |
| n. Hair volume (Transplant) | | o. Facial bones | | p. Arms & legs bones | |
| q. Other | | | | | |

9. Human figures: This variable refers to if the article consists of general persons, celebrities, or no human figure.
 - No human figure = 0
 - Celebrities = 1
 - Non-celebrities = 2
 - Both celebrities and non-celebrities = 3

10. Images: This variable refers to classifying different kinds of photos or pictures in the contents reflects cosmetic surgery product, service or beauty framing content.
 - None = 0
 - Before-and-after photos (cosmetic surgery, make-up, product) = 1
 - Contrast photo of celebrity (images are used to indicate the difference or highlight the point) = 2
 - Scientific explanatory drawing (skeletal/muscle structure diagram, surgery process flow diagram, fitness action demonstration) = 3
 - Stills, events photos, and snapshots of celebrity (e.g. social media influencer actress, entrepreneur) = 4
 - Photos of physician = 5
 - Other = 6

11. Appeals of content: This variable is concerned with whether the content is associated with informative or entertainment appeals
 - Informative: The article is providing information of beauty or facts about the attributes of brand, product or service that will give consumers need to make decisions = 1
 - Entertainment: The article is providing content not tied with cosmetic surgery but about the story of others' (especially celebrities) life, career, or romance = 2
 - Both informative and entertainment = 3
 - Other = 4

12. Number of readings: Reference to how many times the article has been read.

13. Number of "wow": Reference to how many people clicked "wow" for the article.

14. Number of "Like": Reference to how many people clicked "Like" for the article.

APPENDIX F: Coding Sheet

1. Release Date of Article: _____
2. Release Position of Article in The Post (1-8)
 - 1) First place
 - 2) Second place
 - 3) Third place
 - 4) Fourth place
 - 5) Fifth place
 - 6) Sixth place
 - 7) Seventh place
 - 8) Eighth place
3. Article Type
 - 1) Original
 - 2) Repost
4. Hook (element 1)
 - 0) None
 - 1) Gossip
 - 2) Variety entertainment programs
 - 3) Movie/Drama review
 - 4) News
 - 5) Recommendation for other official accounts
 - 6) Patients' diary or experience about cosmetic surgery
 - 7) Other, please specify _____
5. Beauty Framing (element 2)
 - 0) None
 - 1) Aesthetics
 - 2) Physical appearance and/or body image
 - 3) Temperament
 - 4) Other, please specify _____
6. Solutions (element 3)
 - 0) None
 - 1) Through conducting cosmetic surgery
 - 2) Through non-cosmetic surgery approaches
 - 3) Engage in fitness
 - 4) Other, please specify _____

7. Overt ads or promotions (element 4)
- 0) None
 - 1) Product information
 - 2) Promotions
 - 3) Clinic or physician information
 - 4) Other, please specify_____
8. Specific body part that needs to be improved
- 0) None
 - 1) One or more
 - a) Eyes;
 - b) Nose
 - c) Ears
 - d) Mouth
 - e) Chin
 - f) Arms
 - g) Breast
 - h) Back
 - i) Abdomen
 - j) Hip
 - k) Legs
 - l) Skin care (Whitening, wrinkle removal, oil-control)
 - m) Facial features (Face lift/slim, face shape)
 - n) Hair (Transplant)
 - o) Facial bones
 - p) Arms and legs bones
 - q) Other, please specify_____
9. Human Figures
- 0) No human figure
 - 1) Celebrity
 - 2) Non-celebrities
 - 3) Both celebrities and non-celebrities
10. Image
- 0) None
 - 1) Before-and-after photos
 - 2) Contrast photo of celebrity
 - 3) Scientific explanatory drawing
 - 4) Stills, events photos, and snapshots of celebrity

- 5) Photos of physician
- 6) Other, please specify _____

11. Appeals of Content

- 1) Informative
- 2) Entertainment
- 3) Combination Informative & Entertainment
- 4) Other, please specify _____

12. Number of Reading: _____

13. Number of “wow”: _____

14. Number of “Like”: _____

APPENDIX G: Statistic Results From SPSS

Table 7. Parameter Estimates - Number of Elements & Engagement

Parameter	Parameter Estimates						
	B	Std. Error	95% Wald Confidence Interval		Hypothesis Test		
			Lower	Upper	Wald Chi-Square	df	Sig.
(Intercept)	2.023	.2180	1.596	2.450	86.174	1	.000
One Element	.934	.2038	.534	1.333	20.999	1	.000
Two Elements	1.036	.2121	.620	1.451	23.834	1	.000
Three Elements	.309	.2053	-.094	.711	2.258	1	.133
Four Elements	0 ^a	.	.	.	.	.	.
Number of reading	5.022E-5	1.9235E-6	4.645E-5	5.399E-5	681.791	1	.000
(Scale)	1 ^b						
(Negative binomial)	1 ^b						
<p>Dependent Variable: Engagement Indicators (Number of Like and Wow)</p> <p>Model: (Intercept), Total Number of Elements, Number of reading</p> <p>a. Set to zero because this parameter is redundant.</p> <p>b. Fixed at the displayed value.</p>							

Table 8. Pairwise Comparisons Tests - Number of Elements & Engagement

(I) Total Number of Elements	(J) Total Number of Elements	Pairwise Comparisons				95% Wald Confidence Interval for Difference	
		Mean Difference (I-J)	Std. Error	df	Sig.	Lower	Upper
1	2	-114.13	187.777	1	.543	-482.17	253.91
	3	494.94 ^a	134.673	1	.000	230.98	758.89
	4	646.24 ^a	137.976	1	.000	375.82	916.67
2	1	114.13	187.777	1	.543	-253.91	482.17
	3	609.07 ^a	157.409	1	.000	300.55	917.59
	4	760.37 ^a	162.273	1	.000	442.33	1078.42
3	1	-494.94 ^a	134.673	1	.000	-758.89	-230.98
	2	-609.07 ^a	157.409	1	.000	-917.59	-300.55
	4	151.31	96.156	1	.116	-37.16	339.77
4	1	-646.24 ^a	137.976	1	.000	-916.67	-375.82
	2	-760.37 ^a	162.273	1	.000	-1078.42	-442.33
	3	-151.31	96.156	1	.116	-339.77	37.16
<p>Pairwise comparisons of estimated marginal means based on the original scale of dependent variable Engagement Indicators (Number of Like and Wow)</p> <p>a. The mean difference is significant at the .05 level.</p>							

Table 9. Parameter Estimates - Hook & Engagement

Parameter	Parameter Estimates						
	B	Std. Error	95% Wald Confidence Interval		Hypothesis Test		
			Lower	Upper	Wald Chi-Square	df	Sig.
(Intercept)	2.373	.2278	1.927	2.820	108.584	1	.000
No Hook	.487	.2174	.061	.913	5.028	1	.025
Gossip	.175	.2198	-.256	.605	.631	1	.427
Entertainment program	.099	.2269	-.345	.544	.192	1	.661
Movie or drama review	.643	.2640	.125	1.160	5.928	1	.015
Celebrity or social influencer introduction	.020	.2618	-.493	.533	.006	1	.939
News	.095	.3766	-.644	.833	.063	1	.802
Patient diaries, experiences, or appearance analysis	.290	.3268	-.350	.931	.788	1	.375
Other	0 ^a	.	.	.	.	.	.
Number of reading	5.155E-5	2.1020E-6	4.743E-5	5.567E-5	601.512	1	.000
(Scale)	1 ^b						
(Negative binomial)	1 ^b						
<p>Dependent Variable: Engagement Indicators (Number of Like and Wow)</p> <p>Model: (Intercept), Hook Category, Number of reading</p> <p>a. Set to zero because this parameter is redundant.</p> <p>b. Fixed at the displayed value.</p>							

Table 10. Pairwise Comparisons Tests - Hook & Engagement

(I) Hook Category	(J) Hook Category	Pairwise Comparisons					
		Mean Difference (I-J)	Std. Error	df	Sig.	95% Wald Confidence Interval for Difference	
						Lower	Upper
No hook	Gossip	288.85	187.220	1	.123	-78.09	655.80
	Entertainment programs	345.76	187.398	1	.065	-21.54	713.05
	Movie or drama review	-180.88	295.136	1	.540	-759.34	397.58
	Celebrity or social influencer introduction	401.54 ^a	203.966	1	.049	1.77	801.30
	News	349.31	283.381	1	.218	-206.11	904.72
	Patient diaries, experiences, or appearance analysis	192.55	286.259	1	.501	-368.51	753.60
	Others	414.84 ^a	184.987	1	.025	52.28	777.41
Gossip	No hook	-288.85	187.220	1	.123	-655.80	78.09
	Entertainment programs	56.90	150.430	1	.705	-237.93	351.74
	Movie or drama review	-469.73	273.046	1	.085	-1004.89	65.43
	Celebrity or social influencer introduction	112.68	167.884	1	.502	-216.36	441.73
	News	60.45	269.260	1	.822	-467.29	588.19
	Patient diaries, experiences, or appearance analysis	-96.31	270.706	1	.722	-626.88	434.27
	Others	125.99	156.596	1	.421	-180.93	432.91

Table 10 (cont'd)

Entertainment programs	No hook	-345.76	187.398	1	.065	-713.05	21.54
	Gossip	-56.90	150.430	1	.705	-351.74	237.93
	Movie or drama review	-526.64	273.161	1	.054	-1062.02	8.75
	Celebrity or social influencer introduction	55.78	168.070	1	.740	-273.63	385.19
	News	3.55	269.383	1	.989	-524.43	531.53
	Patient diaries, experiences, or appearance analysis	-153.21	270.827	1	.572	-684.02	377.60
	Others	69.09	156.803	1	.660	-238.24	376.42
Movie or drama review	No hook	180.88	295.136	1	.540	-397.58	759.34
	Gossip	469.73	273.046	1	.085	-65.43	1004.89
	Entertainment programs	526.64	273.161	1	.054	-8.75	1062.02
	Celebrity or social influencer introduction	582.42 ^a	283.130	1	.040	27.49	1137.34
	News	530.19	352.906	1	.133	-161.50	1221.87
	Patient diaries, experiences, or appearance analysis	373.43	353.997	1	.291	-320.39	1067.25
	Others	595.72 ^a	276.663	1	.031	53.47	1137.97
Celebrity or social influencer introduction	No hook	-401.54 ^a	203.966	1	.049	-801.30	-1.77
	Gossip	-112.68	167.884	1	.502	-441.73	216.36
	Entertainment programs	-55.78	168.070	1	.740	-385.19	273.63
	Movie or drama review	-582.42 ^a	283.130	1	.040	-1137.34	-27.49
	News	-52.23	280.857	1	.852	-602.70	498.24
	Patient diaries, experiences, or appearance analysis	-208.99	281.996	1	.459	-761.69	343.71
	Others	13.31	174.912	1	.939	-329.51	356.13

Table 10 (cont'd)

News	No hook	-349.31	283.381	1	.218	-904.72	206.11
	Gossip	-60.45	269.260	1	.822	-588.19	467.29
	Entertainment programs	-3.55	269.383	1	.989	-531.53	524.43
	Movie or drama review	-530.19	352.906	1	.133	-1221.87	161.50
	Celebrity or social influencer introduction	52.23	280.857	1	.852	-498.24	602.70
	Patient diaries, experiences, or appearance analysis	-156.76	346.550	1	.651	-835.99	522.47
	Others	65.54	268.668	1	.807	-461.04	592.11
Patient diaries, experiences, or appearance analysis	No hook	-192.55	286.259	1	.501	-753.60	368.51
	Gossip	96.31	270.706	1	.722	-434.27	626.88
	Entertainment programs	153.21	270.827	1	.572	-377.60	684.02
	Movie or drama review	-373.43	353.997	1	.291	-1067.25	320.39
	Celebrity or social influencer introduction	208.99	281.996	1	.459	-343.71	761.69
	News	156.76	346.550	1	.651	-522.47	835.99
	Others	222.30	270.888	1	.412	-308.64	753.23
Others	No hook	-414.84 ^a	184.987	1	.025	-777.41	-52.28
	Gossip	-125.99	156.596	1	.421	-432.91	180.93
	Entertainment programs	-69.09	156.803	1	.660	-376.42	238.24
	Movie or drama review	-595.72 ^a	276.663	1	.031	-1137.97	-53.47
	Celebrity or social influencer introduction	-13.31	174.912	1	.939	-356.13	329.51
	News	-65.54	268.668	1	.807	-592.11	461.04

Table 10 (cont'd)

Patient diaries, experiences, or appearance analysis	-222.30	270.888	1	.412	-753.23	308.64
<p>Pairwise comparisons of estimated marginal means based on the original scale of dependent variable Engagement Indicators (Number of Like and Wow)</p> <p>a. The mean difference is significant at the .05 level.</p>						

Table 11. Parameter Estimates - Beauty Framing & Engagement

Parameter Estimates							
Parameter	B	Std. Error	95% Wald Confidence Interval		Hypothesis Test		
			Lower	Upper	Wald Chi-Square	df	Sig.
(Intercept)	1.783	.4885	.826	2.741	13.325	1	.000
No beauty framing	1.100	.4645	.189	2.010	5.606	1	.018
Aesthetics	.242	.5426	-.821	1.305	.199	1	.656
Physical appearance and/or body image	.672	.4549	-.220	1.563	2.180	1	.140
Temperament	0 ^a	.	.	.	.	.	.
Number of reading	5.209E-5	1.9775E-6	4.821E-5	5.596E-5	693.822	1	.000
(Scale)	1 ^b						
(Negative binomial)	1 ^b						
<p>Dependent Variable: Engagement Indicators (Number of Like and Wow)</p> <p>Model: (Intercept), Beauty Framing, Number of reading</p> <p>a. Set to zero because this parameter is redundant.</p> <p>b. Fixed at the displayed value.</p>							

Table 12. Pairwise Comparisons Tests - Beauty Framing & Engagement

Pairwise Comparisons							
(I) Beauty Framing	(J) Beauty Framing	Mean Difference (I-J)	Std. Error	df	Sig.	95% Wald Confidence Interval for Difference	
No beauty framing	Aesthetics	660.92 ^a	194.466	1	.001	279.78	1042.07
	Physical appearance and/or body image	399.63 ^a	142.411	1	.005	120.51	678.75
	Temperament	765.55 ^a	215.793	1	.000	342.60	1188.49
Aesthetics	No beauty framing	-660.92 ^a	194.466	1	.001	-1042.07	-279.78
	Physical appearance and/or body image	-261.30	159.041	1	.100	-573.01	50.42
	Temperament	104.62	226.652	1	.644	-339.60	548.85
Physical appearance and/or body image	No beauty framing	-399.63 ^a	142.411	1	.005	-678.75	-120.51
	Aesthetics	261.30	159.041	1	.100	-50.42	573.01
	Temperament	365.92 ^a	180.670	1	.043	11.81	720.03
Temperament	No beauty framing	-765.55 ^a	215.793	1	.000	-1188.49	-342.60
	Aesthetics	-104.62	226.652	1	.644	-548.85	339.60
	Physical appearance and/or body image	-365.92 ^a	180.670	1	.043	-720.03	-11.81
<p>Pairwise comparisons of estimated marginal means based on the original scale of dependent variable Engagement Indicators (Number of Like and Wow)</p> <p>a. The mean difference is significant at the .05 level.</p>							

Table 13. Parameter Estimates - Solutions & Engagement

Parameter	Parameter Estimates						
	B	Std. Error	95% Wald Confidence Interval		Hypothesis Test		
			Lower	Upper	Wald Chi-Square	df	Sig.
(Intercept)	1.843	.5997	.668	3.018	9.445	1	.002
No solutions	1.019	.5861	-.129	2.168	3.025	1	.082
Cosmetic surgery	.528	.5919	-.632	1.688	.796	1	.372
Non-cosmetic surgery	.709	.5953	-.458	1.876	1.418	1	.234
Combination of the two	0 ^a	.	.	.	.	.	.
Number of reading	5.094E-5	1.9196E-6	4.718E-5	5.470E-5	704.230	1	.000
(Scale)	1 ^b						
(Negative binomial)	1 ^b						
<p>Dependent Variable: Engagement Indicators (Number of Like and Wow)</p> <p>Model: (Intercept), Solutions, Number of reading</p> <p>a. Set to zero because this parameter is redundant.</p> <p>b. Fixed at the displayed value.</p>							

Table 14. Pairwise Comparisons Tests - Solutions & Engagement

Pairwise Comparisons							
(I) Solutions	(J) Solutions	Mean Difference (I-J)	Std. Error	df	Sig.	95% Wald Confidence Interval for Difference	
						Lower	Upper
No solutions	Cosmetic surgery	398.08 ^a	115.568	1	.001	171.57	624.59
	Non-cosmetic surgery	273.79 ^a	134.979	1	.043	9.23	538.34
	Combination of the two	655.64 ^a	231.920	1	.005	201.09	1110.20
Cosmetic surgery	No solutions	-398.08 ^a	115.568	1	.001	-624.59	-171.57
	Non-cosmetic surgery	-124.29	126.299	1	.325	-371.83	123.25
	Combination of the two	257.56	227.257	1	.257	-187.85	702.98
Non-cosmetic surgery	No solutions	-273.79 ^a	134.979	1	.043	-538.34	-9.23
	Cosmetic surgery	124.29	126.299	1	.325	-123.25	371.83
	Combination of the two	381.85	237.385	1	.108	-83.41	847.12
Combination of the two	No solutions	-655.64 ^a	231.920	1	.005	-1110.20	-201.09
	Cosmetic surgery	-257.56	227.257	1	.257	-702.98	187.85
	Non-cosmetic surgery	-381.85	237.385	1	.108	-847.12	83.41
Pairwise comparisons of estimated marginal means based on the original scale of dependent variable Engagement Indicators (Number of Like and Wow) a. The mean difference is significant at the .05 level.							

Table 15. Parameter Estimates - Overt Ads & Engagement

Parameter	B	Std. Error	95% Wald Confidence Interval		Hypothesis Test		
			Lower	Upper	Wald Chi-Square	df	Sig.
(Intercept)	1.888	.4063	1.091	2.684	21.588	1	.000
No overt ads	1.214	.4005	.429	1.999	9.195	1	.002
Product information	.838	.4262	.003	1.673	3.865	1	.049
Promotions and interaction events	.811	.4159	-.004	1.626	3.802	1	.051
Clinic or physician information	0 ^a	.	.	.	.	.	.
Number of reading	4.717E-5	2.3354E-6	4.259E-5	5.174E-5	407.891	1	.000
(Scale)	1 ^b						
(Negative binomial)	1 ^b						
<p>Dependent Variable: Engagement Indicators (Number of Like and Wow)</p> <p>Model: (Intercept), Overt Ads, Number of reading</p> <p>a. Set to zero because this parameter is redundant.</p> <p>b. Fixed at the displayed value.</p>							

Table 16. Comparisons Tests - Overt Ads & Engagement

		Pairwise Comparisons					
(I) Overt Ads	(J) Overt Ads	Mean Difference (I-J)	Std. Error	df	Sig.	95% Wald Confidence Interval for Difference	
						Lower	Upper
No overt ads	Product information	302.63 ^a	144.868	1	.037	18.70	586.57
	Promotions and interaction events	320.20 ^a	148.013	1	.031	30.10	610.30
	Clinic or physician information	678.01 ^a	137.636	1	.000	408.25	947.77
Product information	No overt ads	-302.63 ^a	144.868	1	.037	-586.57	-18.70
	Promotions and interaction events	17.56	160.822	1	.913	-297.64	332.77
	Clinic or physician information	375.38 ^a	162.357	1	.021	57.16	693.59
Promotions and interaction events	No overt ads	-320.20 ^a	148.013	1	.031	-610.30	-30.10
	Product information	-17.56	160.822	1	.913	-332.77	297.64
	Clinic or physician information	357.82 ^a	154.023	1	.020	55.94	659.69
Clinic or physician information	No overt ads	-678.01 ^a	137.636	1	.000	-947.77	-408.25
	Product information	-375.38 ^a	162.357	1	.021	-693.59	-57.16
	Promotions and interaction events	-357.82 ^a	154.023	1	.020	-659.69	-55.94
<p>Pairwise comparisons of estimated marginal means based on the original scale of dependent variable Engagement Indicators (Number of Like and Wow)</p> <p>a. The mean difference is significant at the .05 level.</p>							

Table 17. Parameter Estimates - Content Appeal & Engagement

Parameter	Parameter Estimates						
	B	Std. Error	95% Wald Confidence Interval		Hypothesis Test		
			Lower	Upper	Wald Chi-Square	df	Sig.
(Intercept)	2.444	.2391	1.975	2.913	104.469	1	.000
Informative	.264	.1910	-.110	.639	1.912	1	.167
Entertainment	.395	.1751	.052	.739	5.098	1	.024
Combination of the two	0 ^a	.	.	.	.	.	.
Number of reading	5.023E-5	2.0705E-6	4.618E-5	5.429E-5	588.645	1	.000
(Scale)	1 ^b						
(Negative binomial)	1 ^b						
<p>Dependent Variable: Engagement Indicators (Number of Like and Wow)</p> <p>Model: (Intercept), Content Appeal, Number of reading</p> <p>a. Set to zero because this parameter is redundant.</p> <p>b. Fixed at the displayed value.</p>							

Table 18. Pairwise Comparisons Tests - Content Appeal & Engagement

Pairwise Comparisons							
(I) Content Appeal	(J) Content Appeal	Mean Difference (I-J)	Std. Error	df	Sig.	95% Wald Confidence Interval for Difference	
						Lower	Upper
Informative	Entertainment	-116.50	129.297	1	.368	-369.91	136.92
	Combination of the two	192.92	135.620	1	.155	-72.89	458.73
Entertainment	Informative	116.50	129.297	1	.368	-136.92	369.91
	Combination of the two	309.42 ^a	127.939	1	.016	58.66	560.17
Combination of the two	Informative	-192.92	135.620	1	.155	-458.73	72.89
	Entertainment	-309.42 ^a	127.939	1	.016	-560.17	-58.66
<p>Pairwise comparisons of estimated marginal means based on the original scale of dependent variable Engagement Indicators (Number of Like and Wow)</p> <p>a. The mean difference is significant at the .05 level.</p>							

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