

The Importance of Body Art Regulations

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ABSTRACT

This paper informs the reader about the lack of regulatory programs that govern body art. The topics include a brief history of tattoo art and body piercing art, health threats related to body art, the current regulations and the importance of the approaches to regulating body art. The focus of this paper is on tattoos and body piercing. These practices can have many health threats due to the unsterile applications and careless procedures. There is an important need for regulation in body art practices in order to protect the public from health threats. The best approach to regulate these practices would be to combine command-and-control methods with flexible approaches designed to educate and certify the artists involved with body art.

IMPLICATIONS

Many health threats are associated with body art. Regulating body art may result in preventing some of these health threats and risks. However, if we regulate body art practices, new problems will result. For example, regulating a new area will require more time, money, and people resources. New rules and guidelines will have to be created, along with new enforcement teams. This could result in the need for more regulatory agencies or positions. The establishment of body art regulations will also involve policy and law makers. These agencies will have to understand the parameters of body art regulation and the purposes behind it, in order to be successful. If body art practices are not regulated, more procedures will be carried out in ways that may pose harm to those receiving the body art. Using unsterile equipment, applications in unsanitary conditions, and improperly disposing of hazardous wastes can all result in health risks if there are no regulatory systems for body art. These factors can result in significant health risks to the public. A regulatory program could eliminate or reduce these health threats.

INTRODUCTION

Currently, public health faces a serious concern dealing with the regulations of body art and body art practices. In recent years, an increase has been observed in the number and nature of body art procedures (1). There is little protection from the transmission of blood borne disease and infection available for people receiving body art. This is primarily because of the techniques of body art and body art practice. To regulate these practices, an enforcement of some type would be necessary. Some state and local governments have initiated regulations of body art, but the federal government has no universal regulations that these body art services are required to follow (2). Communicable diseases such as HIV, hepatitis, and toxic shock syndrome, along with localized diseases such as herpes and psoriasis, have been reported in connection to these practices (3). The dramatic increase in body art practice (2, 3, 4 & 5) adds to the population=s fear of contracting body art related diseases and infections (1). The industry of body art needs to be regulated to protect the exposed population from disease and infection. Therefore, what would be the best method in regulating? This paper will discuss the health complications to body art and identify approaches to be effective in creating regulations, or improving the existing ones.

HISTORY

The history of body art is addressed to fully understand its impact and persistent existence on culture and societies. In knowing body art=s place of importance in cultures, one will clearly be able to define proper methods of assessment and control.

TATTOOS

Tattoos are defined as permanent coloration of the second layer of the dermis (4). They are applied by injecting the skin with pigment 50 to 3,000 times a minute to the depth of 1/64 to 1/16 of an inch using whisker thin needles (2). The art of tattoos has existed since 12,000 years before Christ, according to Amy Krakow, publisher of *The Tattoo Book* (4). In Egypt it dates from the time of the building of the great pyramids thousands of years BC (4, 7). It was practiced in China before 2000 BC and in Persia, Greece, Arabia, Japan, and the South Sea Islands quite some time before the Christian era (4).

The reason for tattooing was usually for ceremonies and/or religious beliefs. For example, the Maori people of New Zealand were renowned for their facial tattoos. The women received certain facial tattoos as a rite of passage into womanhood (8). The Baiga women of Madhya Pradesh, India also performed tattooing as a puberty ritual (9). Tattoos also showed tribal rank, as in the Ainu people of Western Asia and in Polynesia (4).

Culture and time has changed, and so has the opinion of tattoos. For instance, Pope Hadrid I banned the practice in 787 AD in Rome, claiming it was a barbarian practice (7). It wasn't until 1691 that tattooing emerged in Western Europe in a civilized society and began its acceptance. In the late 1700s, Captain Cook brought tattoos to the South Sea Islands and presented it as a trend to the men and women of his upper-class audience (4).

All that time, the tattooing procedure was practiced by hand, as a long and tedious sitting (4). It wasn't until 1891, when Samuel O'Reilly patented the first electronic machine. His invention stimulated more growth of tattooing in the western countries, such as in the United States (4).

Within the last 20 years there has been a tremendous increase in the amount of tattoos being given, according to the increase of tattoo ink sales in the United States (9). Many role models, music legends, and sport icons have tattoos, including Dennis Rodman, James Brown, Johnny Depp, and Sean Connery (4). It also seems not to be the fact that someone has a tattoo, but how many. It's more accepted to have tattoos now and the tattoo industry is loving the business.

BODY PIERCING

Body piercing is defined as the practice of using needles, rings, steel posts, or other adornments that penetrate the skin (11). The practice of body piercing is as popular as tattooing, yet there is less documented about its history (12). Body piercing has been found in Rome, where nipples were pierced to signify bravery and to functionally be used by attaching cloaks to them to train athletes in 300 AD (12, 13). Other places where piercings have been found were in Egypt, South America, and Africa (2, 12). The Pharaohs of Egypt ceremoniously had their navels pierced (2). Clark, the author of *The Eye of the Needle*, reported that body piercing has been found in South America, where tribe members wear a thin cane in the lower lip to denote being in their prime in life (12). Similar decorations can be found in Africa where the women stretch their skin to huge sizes (12).

Today, body piercings are used by various tribe societies for decorations and for some ceremonies (14). The creativity of body piercing has interested many sub-cultural groups of developed countries, including groups in the U.S. (12). The popularity of the nose, eyebrow and naval piercings has amplified the creation of more artistic forms of body piercing, instead of the traditional earlobe piercing (12). Now in the U.S. it is common to see piercings anywhere on the body including the lip, chin, and tongue (3, 12).

INCREASE IN BODY ART

In the early 1950=s, a significant increase in the amount of body art began (7). Then with the hippie sub-culture in the 60=s and 70=s, there began a steady stream of quiet tattoo customers (4). Just when society thought it had kept body art away from mainstream, another increase in tattooing and body piercing began in the mid-1980s (4). In an unpublished survey of

10,000 randomly selected households in 1990, 3 % of the population and 5% of the men had tattoos (6). Those percentages translate to between 7 million and 20 million people tattooed (2). According to Carolyn Gard, tattooing is now the country=s fifth-fastest-growing industry, right behind bagels and cellular phones (6). As for body piercing, the numbers of jewelry being purchased has increased dramatically, according to the sales of one of the oldest body-piercing businesses in the U.S. (2).

As mentioned before, the practices of body art are increasing and the public should be aware of the risks and also be protected from as much of the threats as possible. Because of the growth in the body art industry, there can be more problems resulting. For example, Sperry states that 25% of all 15 to 25 year olds are tattooed (15). With this statistic, one should keep in mind as to how much knowledge a 15 to 25 year old has on the threats body art can pose to them. There=s a possibility that this aged population is only concerned with the design, cost, and placement of the new body art. With this dramatic increase in body art services, there needs to be some sort of protection for the customers in a regulatory aspect.

HEALTH THREATS

Body art can contribute to various health threats. Infection can be caused by unsterilized piercing equipment, lack of care after the procedure, or an allergic reaction caused by the inks in tattoos or the composition of jewelry in piercings. The following sections will discuss these potential threats in more detail.

Infectious Disease

Tattooing and body piercing have one main component: skin penetration. Once the protective layer of the skin is broken, the risk of pain, bleeding and infection increases (2). Infections can be as simple as a pink, irritated area, requiring only daily cleaning. However, in a

worst-case scenario, had the tattoo artist not sterilized the equipment between customers, there is the possibility of contracting warts, hepatitis or even contracting HIV (2, 4, 5, 6, 7, 8).

Viral Infection. Hepatitis B & C. One serious viral transmission concern related to body art is hepatitis. Hepatitis is a disease that affects the liver and can lead to cirrhosis, a chronic liver disease. It comes in many types, including A, B, C, D, E, F, and G (16). In medical literature, the main concern with transmission linked to body art has been with Hepatitis B and C (2, 11, 15, & 17). Hepatitis C is believed to be single most important cause of cirrhosis and liver cancer in the Western world (18).

In tattoos, Hepatitis B can be spread from person to person if tattoo needles are inadequately sterilized, claims Kris Sperry, a forensic pathologist and cofounder of the Alliance of Professional Tattooists (19). In 1961, New York City had a scare after an outbreak of hepatitis B was traced back to unsterilized equipment in tattoo parlors (4, 9). Long and Rickman (17) found 17 studies between the years of 1950 and 1980 that relate tattoos to hepatitis. In addition, piercing has also been linked to hepatitis B and C transmission (2, 5, & 20) from piercing guns that cannot be properly sterilized (11).

According to the Center for Disease Control and Prevention, there are 30,000 new cases of Hepatitis B a year (18). Viral hepatitis continues to be a major cause of morbidity and mortality in the world (18). The contraction of hepatitis gives reason of concern to the health safety of those getting body art procedures.

Viral Infection. HIV. Another serious viral transmission concern relating to body art is HIV. HIV stands for Human Immunodeficiency Virus and is the virus that ultimately leads to AIDS. AIDS has no cure and eventually leads to death, and every possible form of protection from it should be applied when necessary. There has been a definite link to tattoos and HIV in prison populations (17, 21). In addition, medical reports state a high probability of HIV contraction can be caused by poor body art practices (22, 23). The procedure of sterilizing all non-disposable equipment would eliminate the opportunity of HIV from being transmitted from person to person via tattooing or body piercing (24).

Bacterial Infection. Besides the worries of viral transmission caused by poor body art techniques, there is also the possibility of contracting a bacterial infection. Included in these bacterial infections are those caused by Staphylococcus aureus, Pseudomonas aeruginosa, group A streptococci, and primary tuberculosis (11). These infections usually have symptoms of pus or discharge at the site of infection, and occasionally systematic infection such as abdominal distention or loose stools (11). Some bacterial infections have resulted in surgery and deformities (11). It has been reported, that of those surveyed by Biggar and Haughie, 24% had discharge accompanying their earlobe piercing (25).

There are two separate occurrences where the bacterial infection can take place. The first is if the piercing was done in a poor sanitary technique or using unsterile equipment. The other is during the aftercare procedure, if the body art is not kept clean or protected as directed (11). If the tattooist follows appropriate cleanliness procedures, and the receiver takes proper care of it afterwards, the risk of bacterial infection at the site would be minimized (15).

Non-Infectious Health Complications. Not only can the actual body art procedures cause medical complications, but so can the ingredients of the inks or the mixture of metals present in the jewelry (2, 5, 26). Tattoo pigments may cause allergic reactions (5). These tattoo pigments can contain elements such as cadmium, cobalt, chromium, copper, iron, titanium, and zinc (2). In addition, the uptake of inks in the lymph nodes is well known, but the long-term effects have not been explored to a high degree and remain unknown (5). Moreover, there is a record of a woman that had to undergo an MRI (magnetic resonance image scanning), and because of her tattoo, had medical complications during the procedure. She complained of feeling a burning pain in her back at the area of her tattoo as soon as it began. It turned out that one of the dyes in her tattoo contained enough iron oxide that two droplets of it could have been pulled across a table with a common horseshoe magnet (27).

Another concern brought up is the jewelry used in body art. If the ingredients contain nickel or brass plating, it tends to produce allergic or infectious responses, or a metal allergic dermatitis (2, 11). Jewelry should be made of gold, stainless steel, niobium, titanium, platinum,

or a low porosity plastic to eliminate these responses (2, 27, 28). Furthermore, both Dr. Botchway, of the Alberta Dental Association, and Drs. Price and Lewis of the American Dental Association, state that oral piercings can result in tooth fractures, keloid scarring, and airway obstruction (28, 29). With these health threats, one can now understand the importance of regulating the body art industry to protect the public health from potential hazards.

REGULATION

Health threats are linked to body art because of careless practices, the lack of education in hazards involved, and the ease of purchasing related products. If body art practices were regulated, these factors can be eliminated and reduce the amounts of infections and disease. The following sections will discuss methods of regulating and types of approaches.

Equipment

An important factor in regulating body art is to regulate the equipment involved. There are no regulations on purchasing body art equipment. For example, anyone can purchase a start up kit via magazines or the Internet for as little as \$295 (2). Likewise, the inks and dyes used in tattooing are just as easily purchased (2). There is also no regulatory limit as to who purchases equipment, and ultimately who performs the tattooing procedures. Perhaps a certificate required by the purchaser before buying any of the merchandise would help to eliminate this problem. This requirement would act like the age restriction when one purchases liquor. This certificate would ensure that a purchaser is qualified in using the equipment.

Controversially, although inks are being injected into one's skin during the tattooing procedure, the Food and Drug Administration (FDA) fails to regulate them (2, 5, and 19). They are considered to be color additives and carry a cosmetic label, with the approval to be topically used (2). The purity and identity in inks are mostly unknown, writes Anderson, a

physician at the Massachusetts General Hospital (5). One ingredient, mercury, was once used in red tattoo ink. The mercury was found to cause red reactions to many people. Even though it is no longer used, the red reactions still occur (26). This may be caused by an unknown ingredient that has not been discovered yet. There are, however, regulations by the FDA on the needles used in tattooing (19, 21). Yet, the ingredients should be a concern to the FDA because of the other potential health complications which dyes can have on one's skin and/or health.

In addition to the lack of regulation of purchasing equipment and the ingredients used, there is also a concern as to how they are purchased. For example, most inks are sold in bulk amounts and the tattooist pours the amount he predicts to use (2). However, if the ink is not all used up, then the ink is usually saved and poured back into the larger container, resulting in a possible contamination of the whole batch. A safer approach would be to remove a smaller amount of pigment into a single-use disposable container, and discard leftovers to eliminate contamination of the whole batch (2).

Approaches For Enforcement

As mentioned before, health effects related to body art can be a very serious threat to people. Results in poor body art procedures have led to infections, transmission of diseases, surgeries, and deformities. These results lead to many preventable health care costs. However, twenty-three states do not enforce any type of body art regulation (See Table 1) (16). There is no uniformity in the nation regarding disposal of biohazard waste products, qualifications of the artist, or of the conditions under which tattooing can be practiced (3). With this in mind, an urgency exists in creating a full, universal guideline for body art to protect the health of the public. But what is the best, most effective option to go about this?

Environmental agencies at local, state and national levels have proposed some regulation of tattoo artists, establishments, equipment and materials (5, 19). In 1986, NEHA, National Environmental Health Association, organized a board to put together a model code guideline

book, which was finally released in 1998 (2, 30). It was called the *NEHA Body Art Model Code and Guidelines Book* (2, 30). It was distributed to each state in hopes of promoting consistent regulations that might be adopted throughout the nation (2). The format of this guideline, however, is very strict to the instruction and regulation of body art. The NEHA approach is primarily to set rules, conduct inspections, and fine when not in compliance; which is referred to as the command-and-control approach (30, 31).

There seems to be an assumption that command-and-control regulation and compliance activities, such as licensing, inspecting and establishing standards, will directly reduce risks or at least prompt change in practice that leads to risk reduction (1, 31, 32). It seems, relative to environmental protection, that there is often a tendency to equate process with outcome, says Wiant (1). Having stricter, more severe rules tend to give the impression that more complying will be accomplished as far as regulating is concerned. However, environmentalists have criticized this method, proposing intervention in these practices to reduce regulations and encourage voluntary incentives as rewards for risk reduction (1, 31, 32).

The more severe the rules and control, the less cooperation an establishment may offer. These stringent regulations can sometimes be contrary to environmental objectives, as well (31). In other words, the enforcing agent is more concerned with fining and tickets than having compliance and safety for the public. The NEHA Body Art Code Book is a very fastidious and particular approach. Even though that method may eventually prove to be the most productive, there may be more effective alternatives (1).

Kris Sperry M.D. and tattooist Mick Michieli-Beasley, created the Alliance of Professional Tattooists (APT) to educate tattooists in proper infection control practices (15). Professional members receive certificates and display them at their establishment. To become professionally certified by the APT, a tattooist must have three years experience at an established location, and take a PDTT class (Preventing Disease Transmission in Tattooing). An ATP professionally certified tattooist could then post their certification in the establishment, marketing their credentials. The alliance can sometimes be more flexible than some regulations given by local and state health departments. But the APT's primary concern is to keep the art

of tattooing safe and legal through education, knowledge and awareness. It actively monitors legislation in preventing tattooing from being over-regulated, controlled or banned (33).

In many health and environmental issues, one size does not fit all the circumstances (1). What needs to be done is to achieve better environmental results by the use of flexible approaches, stressing education, awareness and knowledge, and to make it easier for companies to comply with the help of incentives and rewards for voluntarily hazard prevention (31). The more severe the regulatory forces, the less respect, acceptance, and cooperation the regulated population will offer.

I feel the best approach would be to fuse educational and flexible approach ideas *with* command-and-control approaches. One of the most important factors in regulating body art industry is in education and awareness (33). The key to achieving a safe body art establishment is to teach the distributors of the dangers associated with body art and to encourage voluntary prevention (1, 32). Furthermore, linking the command-and-control methods of regulation with the voluntary approaches could be a more suitable approach (32). This might not only lead to a safe body art establishment, but a reputable one as well.

CONCLUSION

Various environmentalists, legislators, and the concerned general public have noted a dramatic increase in body art procedures. For example, in the last 20 years, the incidence of tattooing among women has increased 400% (17). With this increase in mind, chances of contracting disease or infection from body art also increases. Health effects can be very severe and regulation is essential in preventing these complications. Not all states enforce any guidelines for body art, leading to a higher probability of health effects. The regulations in place now, and the ones that are currently proposed, vary in some degree or another. Some approach the situation in a very severe and commanding way, like the *NEHA Body Art Model Code and Guideline Book*, while others want to focus on education and awareness, such as the ATP certification program. I personally believe that a fusion of both education and

awareness of the practitioners, and the command-and-control approaches would combat the dilemma of body art regulation. This would protect the public health from preventable, body art related health effects, and could possibly lead to the elimination of the related health risks altogether. I hope this report portrays the importance of the creation or revision of regulatory policies, locally, statewide, or nationwide, in order to protect the health of our communities.

ABOUT THE AUTHOR

The name of the author of this report is Stephanie Heldt. She is a student at Bowling Green State University, and is working toward her Bachelor=s in Science in Environmental Health. When she has earned the position to influence the regulations of public health laws, she will be very critical, yet explorative and open-mindedly involved. Until then, she awaits another tattoo.

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