

College Students and Tattoos

Influence of Image, Identity, Family, and Friends

ABSTRACT

Tattoos are popular among many groups of people. College students from a large university in the southwestern United States were queried using the 134-item Armstrong Team Tattoo Attitude Survey. Findings document a progressive increase in tattooing and reflect significant support for tattoos, even from non-tattooed students. Similar and positive demographic characteristics were present in individuals who were both non-tattooed and tattooed. In addition, tattooed people were viewed positively, even among non-tattooed respondents. Friends significantly affected procurement and possession of tattoos, whereas of all family members, the sister was the only significant influence. Overall, friends, identity, and image seem to be the major influences for obtaining tattoos.

Clothes, jewelry, and hairstyles display societal trends and fashions. In addition, what people do to their skin transmits messages between their inner and outer worlds, between the environment and their selves. The application of body art, namely a tattoo, is one such adornment of the skin and a recent societal trend. Although tattoos have existed for thousands of years and have been present in virtually every culture, in the past 2 decades, the United States has seen a tattoo renaissance in people of all ages, social classes, and occupations (Armstrong, 1991).

BACKGROUND

College students are no strangers to the world of tattooing. In fact, they have been one of the liveliest groups to embrace tattooing. One study of 561 tattooed college students (73% of the total sample) in "18 universities across the United States and one college in Australia was conducted to discover the [students'] demographic characteristics, motivational factors, and health concerns" (Greif, Hewitt, & Armstrong, 1999, p. 368). Almost 60% of the tattooed students reported grade point averages of 3.0 or higher and attendance at religious services from one to three times per month. "Most of the respondents (90%) reported continual satisfaction with their tattoos, and 82% would do it again" (Greif et al., 1999, p. 377).

The college years often are cited as a time for increased risk-taking behavior because students are away from home, often for the first time. Risk-taking behaviors reported by tattooed students in the Greif et al. study (1999) reported having more than five drinks of alcohol weekly or monthly (53%), using recreational drugs (39%), smoking cigarettes daily (24%), and engaging in sex-

ual intercourse (95%). Twenty-six percent of the tattooed students reported having sexual experiences with 11 or more partners.

In a study from a small, private, liberal arts college in the northeastern United States, Drews, Allison, and Probst (2000) queried 235 students, of which 37 (16%) were tattooed. Using a series of bipolar adjectives, 29% of the tattooed students rated themselves more "adventurous, creative, artistic, individualistic, and more risky than the non-tattooed student subjects" (Drews et al., 2000, p. 478). These tattooed students also reported greater use of alcohol, tobacco, and illegal drugs, and more risky sexual behavior than the non-tattooed respondents.

In another study of tattooed college students at a large university in the southwestern United States, Forbes (2001) examined the students' "motives, family experiences, personality factors, and perception by others" (p. 785). Some questions for this study were patterned after Armstrong's work in the Greif et al. study (1999). Forbes' conclusions (2001) seemed to confirm Armstrong's previous findings (Armstrong & McConnell, 1994; Armstrong & Pace-Murphy, 1997) that although students with body art are "more risk-takers and less conforming to social expectations," their demographic characteristics were similar to those of the non-tattooed students (Forbes, 2001, p. 785).

Knowledge of the prevalence of tattooed adolescents and young adults is limited. One bold estimate for the prevalence of tattooed individuals ages 15 to 25 is 25% (Sperry, 1991). However, Armstrong and McConnell (1994) and Armstrong and Pace-Murphy (1997) documented a tattoo rate in adolescents of 8.6% and 10%, respectively. Another

study examining Army basic recruits "found over a third (36%) tattooed, with 64% of the tattooed subjects entering the military with tattoos and having obtained them between the ages of 15 and 21 years" (Armstrong, Pace-Murphy, Sallee, & Watson, 2000, p. 137). Many of these tattooed people report feeling good about their tattoos. Although no undue health risks were reported, physical and psychosocial health concerns still exist.

PHYSICAL AND PSYCHOSOCIAL RISKS OF TATTOOING

Physical Risks

Tattooing is an invasive procedure in which pigment is introduced into the skin by multiple punctures to produce an indelible decorative design. During this repetitive puncturing of the skin, a small to moderate amount of serosanguineous fluid is released (Sperry, 1991), so infections and transmission of blood-borne diseases, such as hepatitis B (HBV) and hepatitis C (HCV), are potential physical risks. Only .00004 mL of blood is needed to transfer these diseases (Long & Rickman, 1994), and often people are unaware of any symptoms for many years.

Currently, tattoo artists are not required to have the series of hepatitis immunizations. In the Greif et al. study (1999), one case of hepatitis was reported in a tattooed student. In Oklahoma, a 22-year-old man was hospitalized for a liver transplant following a tattoo procedure performed in a neighboring county of Texas (Armstrong & Kelley, 2001). In addition, Haley and Fischer (2001) reported an assessment of 626 patients who had undergone earlier medical evaluations. Tattoos were observed in 113 (18%) of the patients and yielded "a sample prevalence rate of a

6.9% seropositive response for HCV. The HCV population-standardized prevalence is 2.8%” (Haley & Fischer, 2001, pp. 137, 148).

Considering these risks of disease, major concerns related to tattooing include (Armstrong & Fell, 2000):

- Equipment.
- The artist’s education.
- Physical environment.
- Lack of regulations and enforcement.

For tattooing, “an electric, vertically vibrating instrument that resembles a dentist’s drill punctures the skin with pigment 50 to 3,000 times per minute to a depth of 1/64th to 1/16th of an inch” to produce the design on the skin (Armstrong & Fell, 2000, p. 26). The tattoo pigment is not approved by the U.S. Food and Drug Administration and could contain nonstandardized ingredients. Therefore, depending on the artist’s preference, varying amounts of metallic elements may be present in any of the pigments. Red pigment is the most likely to produce allergic responses (Long & Rickman, 1994; Sperry, 1991). Currently, only 9 states have educational requirements for tattoo artists, 33 states have regulations that govern tattooing, and some states have legislation or regulations pending (Armstrong & Kelley, 2001). However, enforcement of the regulations remains subject to “scant personnel resources of health departments, inadequate funding, or differing departmental priorities” (Armstrong & Fell, 2000, p. 27).

Psychosocial Risks

Psychosocial risks exist when a tattooed person feels disappointment or low self-esteem, or suffers embarrassment because they are not satisfied with the product or are distressed by the public’s or their family’s response to the tat-

too(s). “Whimsical and short decision-making time for the tattoos seem to be [related to] this risk” and are cited frequently by adolescents (Armstrong & McConnell, 1994, p. 123). If a person wants to have a tattoo removed, the options are limited because:

- There may be lack of access to proper treatment.
- The procedure requires cash payment per treatment.
- Removal may take up to a year and require 4 to 12 treatments, depending on the design.

Because of these difficulties, clients often do not complete the treatments because they become impatient or discouraged. In addition, there is usually no guarantee that the total design can be removed.

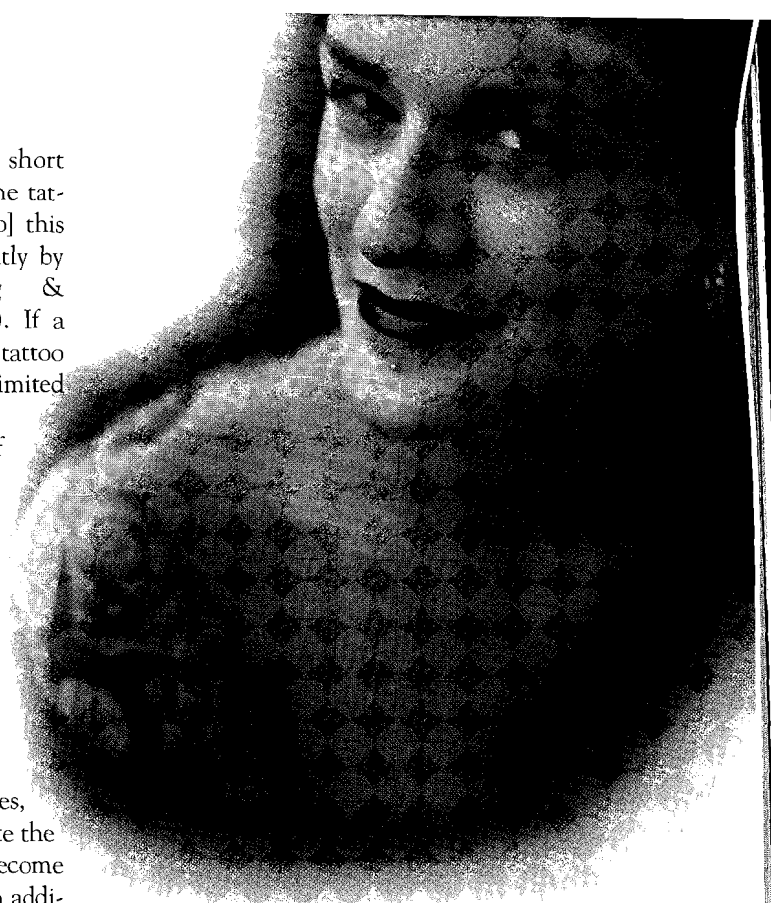
Given these physical and psychosocial concerns, why are tattoos still popular with college students? This study examined the demographics of both non-tattooed and tattooed students and the influence of image, identity, friends, and family.

METHOD

For this study, a descriptive, cross-sectional, quantitative design was used to describe the convenience sample of college students ($N = 520$) enrolled in a large, state-supported university in a rural part of the southwestern United States. The university is located in a predominantly conservative political and religious community.

Instrument

Career women, adolescents, college students, and military recruits have self-reported their tattoo experiences using an objective and subjective questionnaire



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(Armstrong, 1991; Armstrong & McConnell, 1994; Armstrong & Pace-Murphy, 1997; Armstrong et al., 2000; Grief et al., 1999). This initial questionnaire was based on a literature review and field study and explored decision making and risks of tattooing. Face and content validity were established by expert panels for each of the published studies.

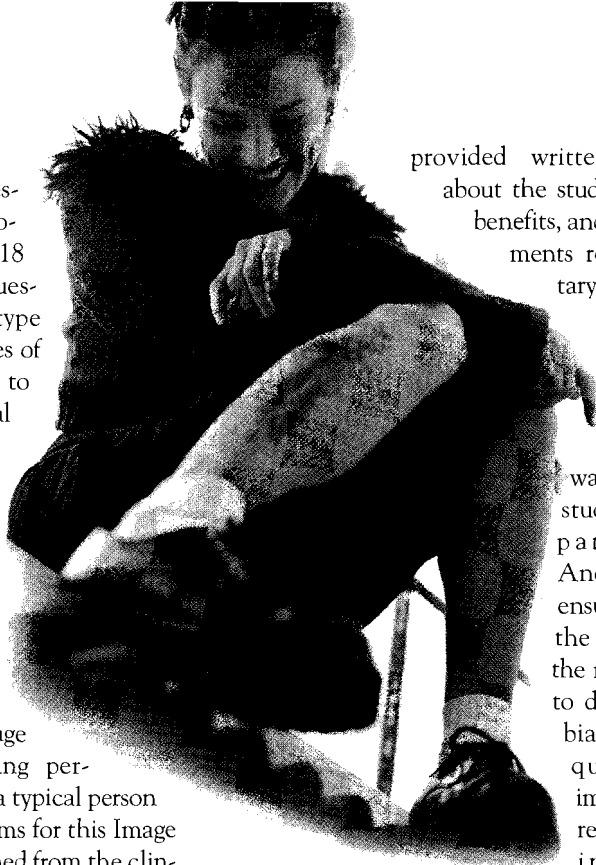
For this study, the items from the initial questionnaire were modified into an attitudinal-type instrument called the Armstrong Team Tattoo Attitude Survey (ATTAS). Reading level for the questionnaire was at the 10th-grade level. Following approval by the Institutional Review Board as an exempt study, a pilot study was conducted with 19 college students, who were similar to the proposed participants, to test the wording of questions and formatting for this group of respondents.

The instrument includes 134 questions and is divided into three sections. All respondents, whether tattooed or non-tattooed, were asked to complete 86 general

attitudinal questions about tattooing, as well as 18 demographic questions. Likert-type scales, with ranges of either 1 to 5 or 1 to 7, were the typical format of these questions. Incorporated within the general attitudinal questions were 17 bipolar adjectives, grouped together to form an Image Scale representing perceived images of a typical person with a tattoo. Items for this Image Scale were obtained from the clinical experiences of the investigators and the literature (Drews et al., 2000; Gibbons & Gerrard, 1995; Stuppy, Armstrong, & Casals-Ariet, 1998). For example, pairs of adjectives included immature/mature, impulsive/deliberate, and ordinary/unique. Each item was scored from 1 = strongly agree on the negative end of the scale to 7 = strongly agree on the positive end of the scale. Internal consistency reliability (i.e., Cronbach's alpha) of the Image Scale in previous research ranged from .92 to .95 (Stuppy et al., 1998). Thirty additional questions were directed specifically at tattooed individuals and included a variety of question formats to examine their tattoo experience and decision-making ability.

Procedure

Participating faculty in the university's sociology department facilitated data collection by providing an explanation of the study to students enrolled in sociology courses and requesting their participation. Next, the faculty distributed a consent form, which



Respondents most likely to have tattoos were older students who were enrolled longer in school and who had less intense religious faith.

provided written information about the study's purpose and benefits, and included statements regarding voluntary participation. If students consented to participate in the study, their signature was obtained. No students declined participation. Anonymity was ensured to increase the candidness of the respondents and to decrease possible bias. Completed questionnaires immediately were returned to the investigative team statistician. The Statistical Package for the Social Sciences (SPSS) was used for data analysis. The total number of surveys completed ($N = 520$) revealed a subject population of 423 non-tattooed students (81%) and 97 tattooed students (19%), who originated from hometown populations ranging from $\leq 50,000$ to $> 200,000$ (Table 1).

FINDINGS

Demographic Characteristics

Useable data were collected from 153 men (30%) and 361 women (70%). Ethnic representation included White (80%), Hispanic (11%), Black (4%), and Other (5%). Most students (86%) in this study were between ages 18 and 22, and many (64%) reported their student classification as freshman or sophomore. Although 22% stated they were very interested in tattoos, 13% stated were very likely or definitely going to obtain a (or another) tattoo. Half (50%) of the students had one or two close friends with tattoos, and 55% reported somewhat to definite interest in tat-

toos. Eighty percent of respondents reported twice monthly church attendance when they were children, but only 40% reported this rate as college students. Regarding parents' education, there was no difference between the non-tattooed and tattooed students $\chi^2(4, [n = 512] = 1.32, p = .86)$. Both groups of students had similar numbers of parents with undergraduate and graduate degrees.

Of the tattooed students ($n = 97$), one student obtained a tattoo in 8th grade, 36% as juniors or seniors in high school, and another 56% while in college. More women (66%) reported tattoos than men (34%). Many (78%) still like their tattoos, and 65% would obtain another. While a few students worried about taking tattooing "too far" (14%) and about not achieving a goal or promotion because of a tattoo (15%), most (98%) currently had never been prevented from achieving a goal or promotion because of their tattoo. However, although most respondents were happy with their tattoos, some of the tattooed students reported they did not like their first tattoo (13%), the tattoo artist did not meet their expectations (18%), they would not obtain another tattoo (35%), and they were not happy with one or more of their tattoos (22%). Reasons for this disappointment included:

- "I just don't want it."
- "It sort of faded."
- "[It] might be too big."
- "[It is] childish."
- "[They are] not the way I wanted them."

Regarding risk-taking behavior, three questions asked about drinking and whether students were "high" on alcohol or drugs when they obtained a tattoo. This 3-item scale had an internal consistency (i.e., Cronbach's alpha) of .85. Only 16% of tattooed stu-

dents reported alcohol or drug use before obtaining their tattoo.

Several characteristics of tattooed and non-tattooed students were compared (Table 1), with significant differences found for tattooed and non-tattooed students' ages, classification, and intensity of religious faith. While some students came to college with tattoos, the majority obtained tattoos while in college $\chi^2(2, [n = 511] = 6.29, p = .04)$. Therefore, the longer students were in college the more likely they were to obtain a tattoo. Juniors and seniors were more likely to have tattoos than lower classmen $\chi^2(1, [n = 514] = 5.83, p = .02)$. No significant difference was noted between student classification and the impulsiveness of their decision to obtain a tattoo.

Students' religiosity also was examined. While there was no difference between non-tattooed and tattooed students in the amount of prayer and church attendance, there was a significant difference $\chi^2(4, [n = 512] = 11.63, p = .02)$ for non-tattooed students in their report of increased strength of religious faith.

Influences For Tattooing

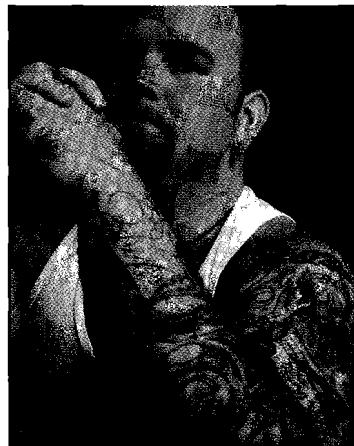
Image. Both non-tattooed and tattooed students completed the 17-item Image Scale, which described the subjects' views of a tattooed person similar to their age. Respondents were requested not to think of any specific individual. Data were coded so a higher score reflected a more positive attitude. Possible scores ranged from 17 to 119, when responses to all items were summed. For the total respondents, the overall mean was 74.5 ($SD = 15.4$), which indicates the reported means fell toward the positive end (i.e., 62%) of the scale ($t[507] = -5.03, p = .00$). When the groups were separated, the non-tattooed

students' (total mean = 72.9, $SD = 15.3$) lowest mean was 3.5 for the foolish/wise pair of adjectives and the highest mean was 5.5 for the boring/interesting pair. For the tattooed students (mean = 81.2, $SD = 14.1$), the lowest mean was 4.0 for the macho/feminine pair of adjectives and the highest was 5.6 for the boring/interesting pair. The Cronbach's alpha for the Image Scale was .90. Significant differences between tattooed and non-tattooed students were noted on all 17 items ($p < .00$).

The Image Scale data were examined further from two other perspectives. One item of the Image Scale was used to identify one group of students who viewed tattooed individuals negatively (i.e., scores from 1 to 3) and a second group who viewed

self-confident, desirable, and progressive. In addition, when the total group of respondents viewed the adjectives as a whole and thought of their image of tattooed people, three attributes had mean scores of greater than 5 on a scale of 1 to 7. These attributes were self-confident (non-tattooed mean = 5.2, tattooed mean = 5.2, $SD = 1.38$), interesting (non-tattooed mean = 5.2, tattooed mean = 5.6, $SD = 1.22$), and unique (non-tattooed mean = 5.1, tattooed mean = 5.5, $SD = 1.17$). Therefore, both tattooed and non-tattooed individuals have a positive or supportive image of tattooed people.

Family and Friends. The influence of friends also supported this positive image for both non-tattooed and tattooed students. The



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tattooed individuals positively (i.e., scores from 5 to 7). Students selecting the middle or neutral point of the scale (4) were not included in this analysis. How these two groups rated the image of tattooed individuals then were compared.

Students who rated tattooed individuals negatively ($n = 114$) perceived them as immoral, crude, unstable, undesirable, and foolish (Table 2), whereas students who viewed tattooed individuals positively ($n = 244$) perceived them as enjoyable, interesting, unique,

reaction of friends to students' tattoos were positive to very positive (64%). Significant differences in image were found when close friends were tattooed at the same time as the student $\chi^2(5) = 48.55, p = .000$, when the student had friends with tattoos $\chi^2(5) = 27.22, p = .000$, and when friends were with the student when he or she was tattooed $\chi^2(4) = 13.10, p = .011$. In addition, the more tattoos a student had, the more likely he or she was to know people with tattoos $\chi^2(7, [n = 518] = 15.9, p = .03$).

TABLE 1**CHARACTERISTICS OF NON-TATTOOED AND TATTOOED RESPONDENTS**

Characteristic	Total n (%)	Non-Tattooed n (%)	Tattooed n (%)
Gender	(n = 514)	(n = 419)	(n = 95)
Men	153 (30)	121 (29)	32 (34)
Women	361 (70)	298 (71)	63 (66)
Age*	(n = 511)	(n = 416)	(n = 95)
18 to 20	341 (67)	288 (69)	53 (56)
21 to 22	97 (19)	73 (18)	24 (25)
≥ 23	73 (14)	55 (13)	18 (19)
Ethnicity	(n = 514)	(n = 419)	(n = 95)
White	415 (80)	341 (81)	74 (78)
Black	21 (4)	16 (4)	5 (5)
Hispanic	58 (11)	48 (12)	10 (11)
Other	20 (5)	14 (3)	6 (6)
Student Classification*	(n = 514)	(n = 419)	(n = 95)
Freshman/Sophomore	331 (64)	280 (67)	51 (54)
Junior/Senior	183 (36)	139 (33)	44 (46)
Size of Hometown	(n = 512)	(n = 417)	(n = 95)
< 50,000 people	208 (41)	171 (41)	37 (39)
50,000 to 200,000 people	151 (29)	122 (29)	29 (31)
> 200,000 people	153 (30)	124 (30)	29 (30)
Religious Activities			
Attended church weekly as a child	(n = 511) 311 (61)	(n = 417) 251 (60)	(n = 94) 60 (64)
Attended church weekly while in college	(n = 510) 108 (21)	(n = 417) 94 (23)	(n = 93) 14 (15)
Moderate to strong faith*	(n = 512) 404 (79)	(n = 417) 339 (81)	(n = 95) 65 (68)
Pray at least daily	(n = 512) 285 (56)	(n = 417) 239 (57)	(n = 95) 46 (48)

* $p < .05$.

Perhaps not surprisingly in this college-age sample, the influence of family was limited. Family members' response to students' tattoos ranged from mixed (53%) to negative (30%). The only family member that was a significant influence to obtain tattoos for both tattooed and non-tattooed students was a sister $\chi^2(1, [N = 520] = 3.87, p = .05)$.

Identity With Tattooed People. The Identity Scale, a 4-item,

Likert-type scale, examined how much the students identified with a person who had a tattoo. The Cronbach's alpha for this scale was .65. There was a significant correlation between the number of tattoos obtained by an individual (i.e., ranging from 1 to more than 5) and the number of people they thought had tattoos $t(513) = 4.6, p = .00$. However, there was no difference in how strongly students

identified with people who had tattoos, regardless of whether or not the student was tattooed ($t[518] = -1.13, p = .26$). When students were asked how many people they knew had tattoos, significant differences were found. Non-tattooed students thought there were less tattooed people their age, whereas tattooed students thought there were more $\chi^2(2, [n = 515], = 6.4, p = .04)$.

DISCUSSION

The study examined why tattoos are so popular among college students. Although it is understood that self-reporting is subject to bias, inaccurate recall, and inflation, the authors recalled that this was perhaps the only way to obtain information on college students' views of tattooing and the extent to which tattooing is present in this population. In this study, the demographics of both non-tattooed and tattooed students and the influence of image, identity, friends, and family were examined to gather data on why tattoos are so popular among college students.

Demographics

Considering the various groups of tattooed individuals studied since the early 1990s, a definite progressive rate for tattooing can be noted. The rate of 19% in college students in this study is the highest recorded amount in a civilian group. The demographics were similar in the non-tattooed

demonstrated considerable interest in tattooing, and more than 10% were very likely to obtain a (or another) tattoo.

However, psychosocial risk was evidenced when some tattooed students cited unhappiness with their tattoos. The 22% rate in this study was higher than that reported in other applicable studies (e.g., 13% in Armstrong et al. [2000], 10% in Greif et al. [1999]). Only a small amount of risk-taking behavior data was obtained from the students. However, although there is a general assumption that tattooed students were high on drugs or alcohol when making their decision and obtaining a tattoo, in this study, as in others (Armstrong, 1991; Armstrong & McConnell 1994; Armstrong & Pace-Murphy, 1997; Armstrong et al., 2000; Forbes, 2001; Greif et al., 1999), there was a low rate of alcohol and drug use reported before the tattoo procedure. This may be because most artists do not tattoo when a client is high on alcohol or drugs because it may

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and tattooed groups to those of previous studies (Forbes, 2001).

In addition, as in Forbes' (2001) study, "many of the negative stereotypes were not found" (p. 785). In this study, age, intensity of faith, and student classification were significantly associated with having a tattoo. Respondents most likely to have tattoos were older students who were enrolled longer in school and who had less intense religious faith. Students

produce increased bleeding or poor consumer response.

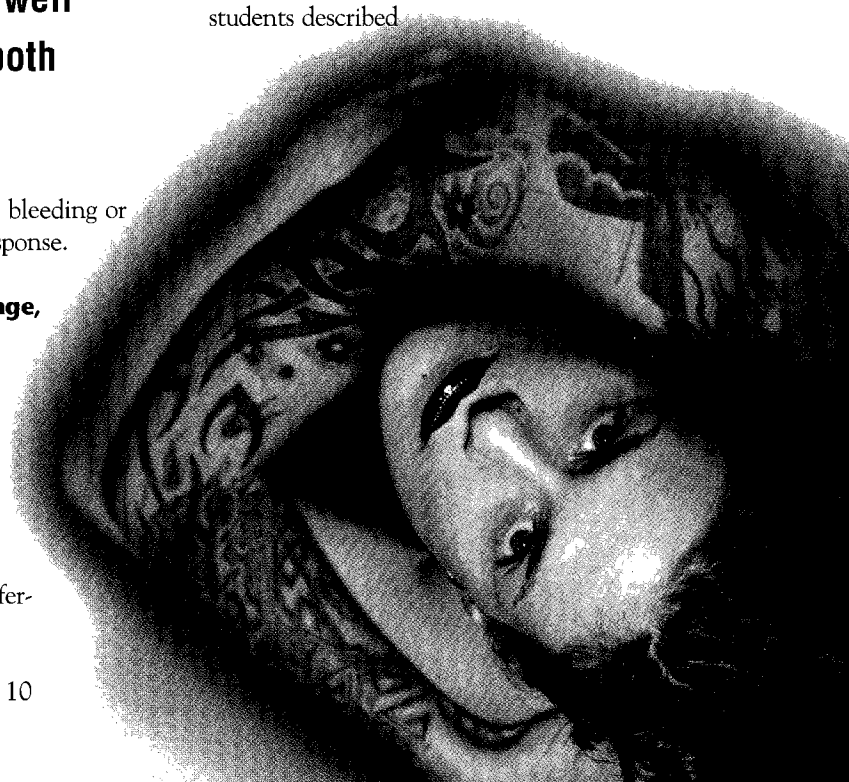
Influence of Image, Identity, Family, and Friends

Image. As in the Drews et al. (2000) and Forbes (2001) studies, "those who have tattoos see themselves differ-

TABLE 2
POSITIVE (N = 246) AND
NEGATIVE (N = 114)
ATTRIBUTES OF A
TYPICAL TATTOOED
PERSON

<i>Positive Attributes</i>	<i>Mean</i>
Enjoyable	5.79
Interesting	5.74
Unique	5.54
Self-confident	5.48
Desirable	5.40
Progressive	5.11
<i>Negative Attributes</i>	
Immoral	2.85
Crude	2.80
Unstable	2.61
Undesirable	2.54
Foolish	2.35

ently from those who do not" (Drews et al., 2000, p. 480). In this study, perceiving tattooed people negatively kept some students from obtaining a tattoo. However, students who perceived tattooed people positively had a stronger, more supportive view of the attributes of tattooed people. Tattooed students described



KEYPOINTS

1. As in other studies, typical negative stereotypes of tattooed people were not found in this college population, and few demographic differences were found between non-tattooed and tattooed students.
2. Tattoos are popular in the college population because both tattooed and non-tattooed students describe the image of and identify with tattooed people in supportive, positive terms; identify similar reasons for obtaining a tattoo (e.g., "I just wanted one"); and provide significant peer support for tattoos. College students are consistently interested in tattoos and are increasingly obtaining them.
3. Because of the potential physical and psychosocial risks associated with tattooing, health care providers must be assertive and proactive with health counseling because college students continue to seek only episodic health care.

positive, energetic images of people who have tattoos and frequently associated with friends who also have tattoos. Surprisingly, even non-tattooed students often described tattooed people in supportive terms and did not seem completely put off by them.

Historically, when assessing risk-taking behavior in young adults, subjects' intention and interest to engage in an activity (e.g., tattooing) has been a popular way to predict behavior. Respondents in this study were interested in tattooed people, as well as the tattooing procedure. Gibbons and Gerrard (1995) believed people take risks because of the image they have of the behavior and the type of person who does the behavior, and perhaps as an attempt to acquire the image they associate with the behavior. Further research into this perspective is suggested, especially considering the strong support for tattooed people reported by both tattooed and non-tattooed students.

Identity. As noted above regarding image, tattooed students

positively identified with tattooed people. A frequently quoted tattoo artist, Lyle Tuttle, described tattooing as "external designs for internal feelings" (Armstrong, 1991, p. 219). Strong responses from tattooed students included "I just wanted one" (i.e., internal feelings), and non-tattooed students gave similar responses when asked if they were going to obtain a tattoo. Coupling the positive perspectives of the two groups of students seems to provide continuing support for the possession and procurement of tattoos.

Family and Friends. As expected with this age group, there was little family influence or support on either having or obtaining a tattoo, compared to the association with and influence of friends. Although no reason could be extracted from the literature for the significant influence of sisters on tattooing, similar generational relationships may partly explain this. Further research is needed to determine why sisters are significant.

The significant support of friends was evidenced when stu-

dents' close friends were tattooed at the same time, when they brought friends with them at the time of tattooing, and by students' continued association with tattooed friends after the tattooing.

CONCLUSION

During the past 25 years, much of the medical and psychological literature has negatively profiled people with tattoos. However, these negative, stereotypical characteristics are not found in contemporary tattoo wearers (i.e., currently tattooed people do not have these characteristics). What is becoming evident visually, as well as in research findings, is that tattooing is popular. It is moving into the mainstream of society and is no longer associated with only bikers and sailors. The college-age population does not perceive tattooing as deviant behavior but as body art. Consistent interest in and increasing procurement of tattoos is evident in the college population, "regardless of costs, risks, or regulations" (Armstrong & McConnell, 1994, p. 28).

In addition, friends, identity, and image seem to be major influences on tattooing. Tattoos are popular with college students because the skin image provides strength in their own identity and image, as well as strong associated support from both tattooed and non-tattooed people. Tattoos allow them to exert more of their persona, so they say "why not" because there are few reported physical risks. Although some reported psychosocial risks exist, they have not dissuaded people from obtaining tattoos.

Currently, health education programs in schools have demonstrated increased awareness of risk behavior, yet this has not been reflected in an "equally impressive decline in health risk behavior" (Gibbons & Gerrard, 1995, p.

505). Health care providers need to be assertive and proactive with health counseling about tattooing because college students continue to seek only episodic health care while they are in school due to economic factors and time constraints.

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