



Tattoos, gender, and well-being among American college students

Jerome R. Koch^{a,*}, Alden E. Roberts^a, Myrna L. Armstrong^b, Donna C. Owen^c

^a Department of Sociology, Anthropology and Social Work, Texas Tech University, Lubbock, TX, USA

^b Faculty of Emerita, School of Nursing, Texas Tech University Health Sciences Center, Lubbock, TX, USA

^c Nursing, School of Nursing, Texas Tech University Health Sciences Center, Lubbock, TX, USA

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ABSTRACT

This research note examines the relationship between survey respondents' reports of escalating numbers of tattoos and their measured levels of self-esteem, depression, suicide ideation, and reports of one or more suicide attempts. Data were gathered from 2,395 college students attending six American public universities. Results indicate a four-fold higher level of reported suicide attempts among females with four or more tattoos as compared to those with no tattoos, or three or less. Paradoxically, results also indicate a statistically significant elevation in self-esteem within that same group. No other findings and comparisons are statistically significant. These findings are interpreted in light of previous research examining the relationship between tattoos and gender, body image, and deviance.

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1. Introduction

The social and behavioral correlates for individuals with tattoos are varied, paradoxical, and multi-faceted. This current body of research examines, among other things, the relationship between tattoo acquisition and interest with the type of wearer, quantity of tattoos, need for uniqueness, gender differences, as well as sexual activity, and religion. There is seemingly clear evidence that body art acquisition correlates with social deviance (Burger & Finkel, 2002; Greif, Hewitt, & Armstrong, 1999; King & Vidourek, 2013). However, visible tattoos are readily observed throughout popular culture among athletes, entertainers, corporate world members, and college student populations (Armstrong, 1991; Atkinson, 2003; DeMello, 2000; Drews, Allison, & Probst, 2000; Koch, Roberts, Armstrong, & Owen, 2005; Kosut, 2006). These mixed findings relate also to the

shifting meaning of tattoos over time. Madfis and Arford (2013) report that as tattoos become more prevalent and visible in mainstream culture, there seems to be an emerging backlash of tattoo regret as wearers see themselves – and their tattoos – differently over time. Armstrong et al. (2008) reported tattoo regret was significantly more prevalent among women. Dickson, Dukes, Smith, and Strapko (2013) report two emotional dynamics in play for tattoo wearers over time. Their respondents report both a greater level of stigma/stigmatization, as well as increased commitment to body modification.

These paradoxical findings relate also to the quantity of tattoos. Recently, Koch, Roberts, Armstrong, and Owen (2010) noted that only individuals with four or more tattoos – as compared to those with none, one, or two/three – were substantively and statistically more likely to engage in heavy drinking, use illegal drugs, have multiple sex partners, or report a significant arrest history. Short of that, however, it seems perhaps a single rose or zodiac sign is no more edgy today than the Beatle haircut in the early 60s. Tate and Shelton (2008) rather forthrightly suggest college

* Corresponding author. Tel.: +1 806 834 3920.

E-mail address: jerome.koch@ttu.edu (J.R. Koch).

students with tattoos and piercings are “all right.” While they do note a statistically significant decrease in conscientiousness and agreeableness among tattooed versus non-tattooed respondents, they conclude that these very small variations likely have no real-world consequence.

The question of emotional motivation also underlies differences (or lack thereof) in behavioral correlates of tattoo interest and procurement. Research suggests tattooed individuals are more likely to be risk-takers, while expressing, and possessing a higher need for uniqueness (Kertzman, Kagan, Vainder, Lapidus, & Wiezman, 2013; Owen, Armstrong, Koch, & Roberts, 2013; Tiggemann & Hopkins, 2011). Even gender differences are evident with tattoo acquisition. Far from the stereotypical tattooed military and “biker” male, the Harris poll (Braveman, 2012) now reports women are more likely to have a tattoo than men (23% vs. 19%, respectively). Again however, a paradox emerges; women are also more likely to seek tattoo removal (Armstrong et al., 2008).

Further complicating these correlations is research interpreting body art acquisition and behavior in light of more general analyses of socio-emotions. For example, Koch et al. (2005) reported that tattooed respondents were more likely to be sexually active, and to have begun a sexual history at an earlier age than those without tattoos. This distinction carries emotional import. Early-onset sexual activity has been reported to correlate with depressive symptoms, and inversely correlate with high self-esteem (Longmore, Manning, Giordano, & Rudolf, 2004).

Other studies also report positive correlations between respondents' histories of emotional, physical, and sexual abuse and the procurement of body art (Lui & Lester, 2012; Romans, Martin, Morris, & Harrison, 1998). And, while those with genital piercings have often reported significant abuse and forced sexual activity against their will, they also report the use of these piercings to help them “take control of (or reclaim) their body after these violations.” (Neliu et al., 2011, p. 1001; Young, Armstrong, Roberts, Mello, & Angel, 2010). Finally, histories of abuse or neglect also tend to predict suicidal ideation, self-injury, and a history of suicide attempts (Andover, Zlotnick, & Miller, 2007). Moreover, these connections appear to be stronger for females (Armstrong, Caliendo, & Roberts, 2006; Roy & Janal, 2006).

This research note examines the emotional motivations and outcomes that accompany escalating acquisitions of tattoos. We report results from surveying college students; we present regression models, correlations and analyses relating gender and number of tattoos with measures of self-esteem, depression, suicide ideation, and suicidal behavior. We address the meaning of these findings and offer an agenda for future research.

2. Methods and results

2.1. The sample

Data were gathered from six purposive samples of college students studying at six American public universities. Students were located in the following regions of the United States and identified by pseudonym: Northeast State, $n = 658$; Southeast State, $n = 328$; Midwest State,

$n = 476$; Midsouth State, $n = 557$; Northwest State, $n = 190$; Southwest State, $n = 185$.

Respondents were recruited from undergraduate sociology classes. Following IRB approval at every location, and obtaining informed consent, 2,394 students chose to respond out of a possible class enrollment of 3,235; our response rate was seventy-four percent. Eighty-two percent of respondents were ages 18–20; sixty-seven percent were Anglo; fifty-nine percent were female.

2.2. Variables and scales

We measured “Well-being” three ways. Scales were developed from examples in existing literature. They are: Self Esteem – ten items, Cronbach's Alpha = .86 (Heatherton & Polivy, 1991); Depression – six items, Cronbach's Alpha = .88 (Radloff, 1977); Suicide Ideation—two items, Cronbach's Alpha = .80 (Radloff, 1977). The final dependent variable recorded the number of times respondents reported having attempted suicide. Specific items and response choices are reported below, in Appendix.

Two independent variables were used in the analysis. These are: Gender—male or female, and Number of Tattoos (None, 1, 2–3, 4+).

2.3. Results

Table 1 reports results from four OLS multiple regression analyses. Each dependent variable – self-esteem, depression, suicide ideation, as well as the reported number of suicide attempts – is regressed on gender and number of tattoos. In addition, when, for example, number of suicide attempts is regressed on gender and number of tattoos, the other three measures of well-being (in this case depression, self-esteem, and suicide ideation) are included for comparative purposes in the model as independent variables. This pattern follows throughout.

Substantive findings are as follows:

1. Gender (female = 1) is positively related to reports of at least one suicide attempt, negatively related to self-esteem, positively related to depression, and, paradoxically, negatively related to suicide ideation. All of the reported coefficients are statistically significant, and they are substantively important in that they hold with the presence of the other well-being variables in the model.
2. Number of tattoos has no association with suicide ideation, yet is positively related to reports of at least one suicide attempt as well as with depression. Paradoxically, number of tattoos is also positively related to self-esteem. These positive relationships are statistically significant, and they are substantively important in that they hold with the presence of the other well-being variables in the model.
3. Relationships among the well-being variables are as expected. Suicide attempts are positively related to depression and suicide ideation; self-esteem is negatively related to suicide attempts (n.s.), depression, and suicide ideation; depression is positive for suicide attempt and suicide ideation and negative for

Table 1
Regressions of Well Being Variables on Independent Variables.

Independent variables	Suicide attempt	Self-esteem	Depression	Suicide ideation
Gender	.037^a	-.789 ^{**}	.261[*]	-.113 ^{**}
(Female = 1)	(.042) ^{*,b}	(-.059) ^{**}	(.037) [*]	(-.082) ^{**}
Number of tattoos	.25[*]	.523[*]	.190[*]	-.014
	(.052) ^{**}	(.073) ^{**}	(.050) ^{**}	(-.019)
Suicide attempt		-.302	.430^{**}	.541^{**}
		(-.020)	(.054) ^{**}	(.340) ^{**}
Self-esteem	-.002		-.244 ^{**}	-.017 ^{**}
	(-.024)		(-.467) ^{**}	(-.167) ^{**}
Depression	.008^{**}	-.907 ^{**}		.039^{**}
	(.066) ^{**}	(-.474) ^{**}		(.195) ^{**}
Suicide ideation	.239^{**}	-.1494 ^{**}	.895^{**}	
	(.380) ^{**}	(-.7631)	(.178) ^{**}	
R ²	.178	.318	.328	.266

^a Unstandardized coefficient

^b Standardized coefficient

^{**} $p < .01$

^{*} $p < .05$.

Table 2
Tattoos and emotional well-being by gender: mean scale scores and statistical significance.

Variable		0 Tattoos	1 Tattoo	2–3 Tattoos	4+Tattoos	Sig.
Self-esteem range = 10–50	Male	38.9	39.6	38.4	40.3	n.s.
	Female	37.8	38.4	39.4	40.0	$p < .05$
	Total	38.3	38.8	39.0	40.0	n.s.
Depression range = 0–18	Male	4.1	4.2	4.2	4.5	n.s.
	Female	4.6	5.0	4.2	5.0	n.s.
	Total	4.4	4.8	4.2	4.8	n.s.
Suicide ideation range = 0–3	Male	.23	.18	.51	.37	n.s.
	Female	.16	.16	.19	.13	n.s.
	Total	.19	.17	.24	.30	n.s.

self-esteem; suicide ideation is positive for suicide attempt and depression, and negative for self-esteem.

In an effort to sort out and specify the nature of the paradoxes noted above, Table 2 reports results of analyses of variance, comparing the significance of mean scale scores on self-esteem, depression, and suicide ideation across categories of respondents' number of tattoos, and by gender. In bivariate analysis, the level of female respondents' self-esteem seems to incrementally increase with each quantity of tattoo. This also was the only group for which any measure of emotional well-being (self-esteem) reached

statistical significance with reference to tattoos. Otherwise there was no substantive or statistically significant relationship between self-esteem (for males), depression, or suicide ideation and the escalating number of respondents' tattoos.

Paradoxically, Fig. 1 shows a dramatic difference in suicidal behavior by gender and escalating number of respondents' tattoos. Among males and females, there is little substantive difference in those who reported at least one previous suicide attempt, until respondents report four or more tattoos. However, respondents with four or more tattoos report one or more previous suicide attempts

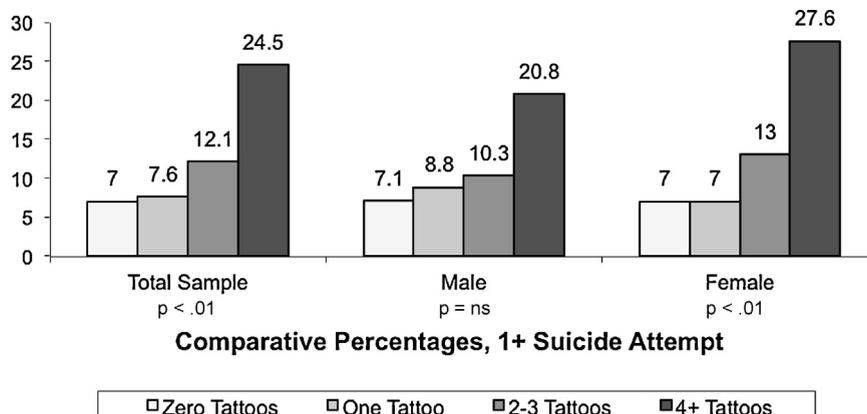


Fig. 1. Number of tattoos and 1+ suicide attempts by gender.

at a rate more than three times higher than those with no tattoos. Moreover, females in this category report a suicide attempt rate of almost four times higher than those with no tattoos. These differences are substantively and statistically significant for the sample as a whole, and for women only. Although the relationship between escalating number of tattoos and reported suicide attempts for males narrowly misses traditional statistical significance ($p < .08$), some scholars do report statistical significance when $p < .1$ (Strully, 2014).

3. Discussion

This research note moves the study of behavior and body art forward with several interesting findings. First, tattoo wearers are changing and gender differences continue to be documented. Our initial multivariate analysis shows that as respondents acquire more tattoos, there appears to be an escalation in both depression and self-esteem. This perhaps reflects Dickson et al.'s (2013) paradoxical findings that tattoo wearers report both stigmatization, and commitment to acquiring more body art. We also report several indicators of negative well-being specifically associated more with females than males. This leads us to a more focused discussion of gender and tattoos.

With respect to gender itself, we report consistently lower measures of well being among women as compared to men. Among these public university students, the cohort of largely freshman and sophomore women have lower levels of self-esteem, higher levels of depression and suicide ideation, and are more likely to report a history of suicide attempts. This adds a small note to the very complicated study of gender and well-being among social scientists in general. However, when we add tattoos to the discussion, an interesting – and we think illuminating – paradox emerges.

While more tattooed women are documenting their behavior as “open to experiences” (Taylor & Keeter, 2010), the incremental increase of self-esteem seen in this study among the tattooed women reflected their current satisfaction with their skin designs, reaching a significant peak with four or more tattoos. Yet, this finding also adds more speculation to the paradoxical nature of tattoos and gender. Recall that Armstrong et al. (2008) reported that women are more likely to become dissatisfied and no longer enamored with their tattoo(s), and more readily seek tattoo removal.

We report that previous suicide attempts are much more common among these survey respondents who also have four or more tattoos. This threshold is nominally consistent with previous research (Koch et al., 2010). However, when controlling for gender, the correlation between those with four or more tattoos and their report of previous suicide attempts remains statistically significant for females only, though again, there is a noticeable substantive difference as well for males.

Finally, we report these findings in light of the Koch et al. (2010) report of a significant and substantive relationship between escalating levels of body art and so-called deviant behavior. Gathering survey data from a similar respondent pool, they documented that those with

four or more tattoos were two to ten times more likely than those with three or less to be binge drinkers, use illegal drugs, and have a sexual history with multiple partners. The behavioral threshold of four or more tattoos correlates significantly, and dramatically again, when correlating a history of attempted suicide among respondents in this study with four or more tattoos versus those with three or less. Many of these findings replicate a similar study from another undergraduate university setting (Owen et al., 2013).

Our findings here show further evidence of a shift in the meaning of tattoos about the time respondents acquire their fourth tattoo. At that point, it's as though one's tattoos become a more constitutive sign of a lifestyle rather than a nominal addition to the presentation of self. There is edginess to one's identity that is characterized by behavior that crosses conventional lines. Our findings here seem to echo that distinction in the correlation between a level of body art at or beyond four tattoos, and reports of at least one suicide attempt. Perhaps these findings further illustrate the co-occurrence of higher levels of body art and elevated alcohol and substance abuse, which are also co-incident with suicide attempts and ideation (Effinger & Stewart, 2012). Further research examining body art acquisition, deviant behavior, and emotional trauma may sort out the time order and direction of these correlations.

And yet, our findings also suggest an elevated level of self-esteem among women with four or more tattoos. This finding is paradoxical to the suicide connection mentioned above, and also with previous research on body art and gender which documents that women experience higher levels of social stigma and tattoo regret (Armstrong et al., 2008). This perhaps partially explains why the link between escalating levels of tattoos is not statistically significant for men. Although we caution that the substantive difference for men is noteworthy and merits further investigation with a more broadly based sample.

However, there is a competing body of research suggesting body art acquisition may be restorative. We note that because the link between number of tattoos and self esteem was significant only for women, we imagine it might well be that women are more apt to seek emotional restoration – a shift in meaning – through procuring tattoos to a greater degree than men. We know that breast cancer survivors sometimes get tattoos in an effort to express, control, or reclaim ownership of their bodies (DeMello, 2000; Langellier, 2001; Radley & Bell, 2007). Women who have a history of sexual trauma acquire genital piercings for similar reasons (Nelius et al., 2011; Young et al., 2010).

While further research is needed to clarify the time-order of a suicide attempt and the acquisition of additional or multiple tattoos, we think efforts at emotional restoration may partially explain our paradoxical findings. Women with four or more tattoos report elevated self esteem at the same time they report a history of attempted suicide. Just as breast cancer survivors and abuse victims acquire tattoos and piercings to restore physical losses, we think the women in our study may be trying to restore emotional losses with more tattoos.

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Appendix A. Appendix

Dependent variables, and scales

1. Self Esteem (Heatherton & Polivy, 1991). Cronbach's Alpha = .86
Response choices: Strongly Disagree, Disagree, Not Sure, Agree, Strongly Agree
On the whole, I am satisfied with myself
At times I think I am no good at all (Reverse coded)
I feel that I have a number of good qualities
I am able to do things as well as most other people
I feel I do not have much to be proud of (Reverse coded)
I certainly feel useless at times (Reverse coded)
I feel that I'm a person of worth
I wish I could have more respect for myself (Reverse coded)
All in all, I am inclined to think that I am a failure (Reverse coded)
I take a positive attitude toward myself
2. Depression (Radloff, 1977). Cronbach's Alpha = .88
To what extent do you currently feel you cannot eat; your appetite is poor?
To what extent do you currently feel you cannot shake off the blues even with the help of family or friends?
To what extent do you currently feel everything is an effort?
To what extent is your sleep currently restless?
To what extent do you currently feel sad?
To what extent do you currently feel you cannot "get going?"
Response choices: Rarely or none of the time (<1 day a week)
Some or a little of the time (1–2 days a week)
Occasionally or a moderate amount of time (3–4 days a week)
Most all the time (5–7 days a week)
3. Suicide Ideation (Radloff, 1977). Cronbach's Alpha = .80
To what extent do you currently think about hurting yourself?
To what extent do you currently think about taking your own life?
Response choices:
Rarely or none of the time (<1 day a week)
Some or a little of the time (1–2 days a week)
Occasionally or a moderate amount of time (3–4 days a week)
Most all the time (5–7 days a week)
4. Suicide Attempts (Radloff, 1977). How often have you attempted suicide?
Response choices: Never, Once, Twice, A few times, Several times
Respondents coded as "Never" or "1+ suicide attempts"

Independent variables:

1. Gender. Are you (1) male or (2) female
2. Number of tattoos: How many tattoos do you currently have?
No tattoos, 1 tattoo, 2–3 tattoos, 4 or more tattoos.

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