

## *Tattoos yesterday and today in the Polish population in the decade 2004–2014*

### BACKGROUND

The fashion for tattooing the body is becoming increasingly widespread. It seems that both the structure and role of factors motivating individuals to obtain tattoos have changed in recent years. The objective of this study was to evaluate the hypothesis that factors encouraging tattooing and the meaning of tattoos have evolved, leading to some significant recent changes.

### PARTICIPANTS AND PROCEDURE

The participants were individuals of Polish ethnicity aged 16–67 years, having at least one tattoo. The first survey, conducted in 2004, encompassed 100 subjects, while the second one, in 2014, involved 200 subjects. Both groups of respondents answered questions about the functions of tattoos and the factors motivating them to obtain a tattoo, as well as expressing their opinions about individuals with body art.

### RESULTS

In the studied decade we found a rise in the number of tattooed women, with tattoos being primarily perceived as an art form and a way to express one's personality, aid self-enhancement, and improve one's sexual attractiveness. Currently, tattooing more seldom serves as a provocation, self-identification, a mark of subculture affiliation, or a way to enhance self-esteem.

### CONCLUSIONS

The functions of tattooing have been rapidly changing. The use among women causes that the perception of tattooing is changing and becoming less aggressive. The mass media insistently promote the fashion for tattoos, which is why this form of body art is becoming more and more popular.

### KEY WORDS

tattoo; motivation; socio-cultural factors

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## BACKGROUND

The phenomenon of permanent body decoration has probably accompanied mankind since the dawn of history (Antoszewski, Kasielska, & Kruk-Jeromin, 2005; Kim, 1991; Tanne, 2000), with tattooing being one of the most widespread practices of this type. Tattoo art is at least five thousand years old, originating in Polynesia, where the word "tatau" means "to hurt" (Morris, 2002).

Katarzyna  
Jaworska,  
Marta  
Fijałkowska,  
Bogusław  
Antoszewski

Since the beginning of the 21<sup>st</sup> century, body ornamentation has been rapidly gaining popularity in Western European culture, with a wider spectrum of social groups acquiring tattoos (Carmen, Guitar, & Dillon, 2012; Laumann & Derick, 2006; Wright, 1995). The fashion for tattoos has been largely promoted by the modern mass media, such as the press, television, and the Internet (Antoszewski et al., 2005; Chimenos, Trave, & Renfigo, 2003; Kozieł, Kretschmer, & Pawłowski, 2010). The popularity of tattooing procedures has grown despite the various health hazards and complications they entail (Antoszewski, Sitek, Jedrzejczak, Kasielska, & Kruk-Jeromin, 2006; Islam et al., 2016; Jacob, 2002; Kluger, 2016; Nishioka, Gyorkos, Joseph, Collet, & Maclean, 2002). Furthermore, it should be noted that in many occupations tattoos are undesirable (Armstrong & McConnell, 1994; Armstrong, Roberts, Owen, & Koch, 2004; Braithwaite, Robillard, Woodring, Stephens, & Arriola, 2001; Caplan, 2000; Deschesnes, Fines, & Demers, 2006; Roberts, Auinger, & Ryan, 2004). Tattooed individuals applying for work in service-oriented businesses report that during job interviews they do not expose their "ornaments", which indirectly attests to the employers' low tolerance towards this form of body art. This in particular concerns organizations which build on public trust and confidence, and for which employee appearance is a paramount element of their image (Brallier, Maguire, Smith, & Palm, 2011; Swanger, 2006; Timming, 2015).

Initially, tattooing was practiced for religious or cultural reasons, e.g., as part of rites or initiations (Caplan, 2000; Ludvico & Kurland, 1995; Stirn, 2003). Currently, tattoos are mostly obtained for their esthetic qualities or because they are fashionable (Schmid, 2013); they may also serve as a form of self-expression or mark important events (Armstrong et al., 2008; Tiggemann & Golder, 2006). According to another hypothesis, tattoos may be an outward display of biological quality, with their ultimate evolutionary goal being the perpetuation of one's genes (Carmen et al., 2012; Kozieł et al., 2010; Kozieł & Sitek, 2013).

The identification of motivations and factors conducive to tattooing may contribute to a better understanding of this increasingly prevalent trend in body ornamentation (Martin, 1997; Tanne, 2000). Indeed, it

seems that both the structure and the role of the factors encouraging this practice have been transformed with its growing popularity. Thus, the objective of the present study was to evaluate the hypothesis that the functions of tattoos and the factors facilitating decisions to obtain them have evolved, leading to some significant recent changes.

## PARTICIPANTS AND PROCEDURE

The material consists of the results of two questionnaire studies conducted in the years 2004 and 2014 in one of the largest Polish cities, located in the center of the country (Lodz). The surveys involved individuals of Polish ethnicity who had at least one tattoo. On both occasions, the respondents were recruited from among the clients of tattoo parlors. The 2004 study examined 100 participants, while the 2014 sample numbered 200; in the latter case some of the respondents were randomly recruited from among the attendees of a 2014 tattoo festival held in Lodz.

In both surveys, the respondents were asked to provide some basic personal information, namely, sex, current age, and age at first tattoo, as well as demographic data, such as educational attainment, parental education, and degree of urbanization of their place of origin. In the main part of the questionnaire, the respondents answered questions concerning what functions their tattoos fulfilled for them, what factors informed their decisions to obtain a tattoo, and what they thought about other people with tattoos. In this section of the questionnaire, the respondents were allowed to select any number of the available options, including the category "other" if their preferred answer was not on the list.

The results of both surveys were evaluated with Student's *t*-test for continuous variables or the chi square test for categorical variables. If statistically significant differences were found for categorical variables, the frequencies of a given category in the two study groups were compared with the proportional test. In the case of questions with more than one possible answer, the frequency of individual variants was compared exclusively by means of the proportional test. All statistical analyses were performed using the software package STATISTICA 10 (StatSoft, Poland).

## RESULTS

### DEMOGRAPHIC CHARACTERISTICS

In 2004, the study group consisted mostly of males (61.0%), while in 2014 female participants were more numerous (66.0%) ( $p < .001$ ) (Table 1, Figure 1). The two study groups did not differ significantly in terms of chronological age (16-65 with a mean of 28.20

Table 1  
Demographic characteristics of respondents

Variable	Year of study		Test statistic	p	
	2014 N = 200	2004 N = 100			
Sex			18.74	< .001	
Female	66.0%	39.0%			
Male	34.0%	61.0%			
Chronological age [years]	27.70 ±8	28.20 ±6	0.35	.271	<i>Motivation for tattooing</i>
Age at first tattoo [years]	22.10 ±5	22.50 ±6	0.17	.863	
Educational attainment of respondents			7.49	.112	
Primary	0.5%	2.0%	nt	nt	
Vocational or incomplete secondary	4.5%	8.0%	nt	nt	
Secondary	39.0%	49.0%	nt	nt	
Incomplete college	27.0%	19.0%	nt	nt	
College	29.0%	22.0%	nt	nt	
Paternal education			3.80	.434	
Primary	16.5%	21.0%	nt	nt	
Vocational or incomplete secondary	11.5%	12.0%	nt	nt	
Secondary	43.5%	48.0%	nt	nt	
Incomplete college	6.5%	3.0%	nt	nt	
College	22.0%	16.0%	nt	nt	
Maternal education			7.68	.104	
Primary	16.0%	26.0%	nt	nt	
Vocational or incomplete secondary	5.0%	3.0%	nt	nt	
Secondary	41.5%	44.0%	nt	nt	
Incomplete college	4.5%	1.0%	nt	nt	
College	33.0%	26.0%	nt	nt	
Population size of respondents' places of origin			0.76	.859	
Village	13.0%	12.0%	nt	nt	
Town with up to 20,000 inhabitants	8.5%	9.0%	nt	nt	
Town with 20,000 to 100,000 inhabitants	18.0%	22.0%	nt	nt	
Town with more 100,000 inhabitants	60.5%	57.0%	nt	nt	

Note. nt – not tested;  $p < .05$ .

±6 years in 2004 and 18-67 with a mean of 27.70 ±8 years in 2014;  $p = .271$ ). The two groups were also similar in terms of age at first tattoo (15-45 with a mean of 22.50 ±6 years and 17-42 with a mean of 22.10 ±5 years, respectively;  $p = .863$ ) (Table 1).

Furthermore, participants of the 2004 and 2014 surveys did not differ significantly in terms of their educational attainment ( $p = .112$ ), with the predominant category being secondary education (49.0%

in 2004 and 39.0% in 2014), or parental education ( $p = .434$  and  $p = .104$  for paternal and maternal education, respectively). Most of the subjects' parents also had secondary education (Table 1).

In both surveys, the majority of participants came from large cities with more than 100,000 inhabitants (57.0% in 2004 and 60.5% in 2014), and so the two groups did not differ significantly in terms of urbanization of their places of origin ( $p = .859$ , see Table 1).

Katarzyna  
Jaworska,  
Marta  
Fijałkowska,  
Bogusław  
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Figure 1. A 28-year-old subject with multiple tattoos on her back and right arm.

#### PERCEIVED FUNCTIONS OF TATTOOING AND THE SOCIO-CULTURAL FACTORS ENCOURAGING TATTOOS IN 2004 AND 2014

As compared to the previous survey, in 2014 more respondents believed that tattoos enhance sexual attractiveness (74.5% vs. 57.0%,  $p = .002$ ), express one's personality (72.0% vs. 14.0%,  $p < .001$ ), are a form of art (66.0% vs. 8.0%,  $p < .001$ ), and promote self-enhancement (24.0% vs. 14.0%,  $p = .044$ ) (Fig. 2A, B). Those respondents were also more likely (60.5% vs. 49.0%) to treat tattoos as ornaments, although that result did not reach statistical significance ( $p = .058$ ). On the other hand, significantly fewer respondents in the 2014 study perceived tattoos as provocative (6.0% vs. 51.0%,  $p < .001$ ), marking subculture affiliation (16.5% vs. 47.0%,  $p < .001$ ), boosting self-esteem (49.0% vs. 62.0%,  $p = .033$ ), or defining one's identity (47.0% vs. 65.0%,  $p = .003$ ). In 2004, the most frequently indicated functions of tattoos (reported by more than 60.0% of the respondents) were defining one's identity and



Figure 2. A 36-year-old subject with multiple tattoos on her back (A) and left calf (B).

Table 2

#### Perceived functions of tattoos

Tattoo*	Year of study		Test statistic	$p$
	2014 $N = 200$	2004 $N = 100$		
Serves as a decoration	60.5%	49.0%	3.59	.058
Is an art form	66.0%	8.0%	93.09	< .001
Expresses one's personality	72.0%	14.0%	72.16	< .001
Helps define one's identity	47.0%	65.0%	2.94	.003
Aids self-enhancement	24.0%	14.0%	4.07	.044
Marks subculture affiliation	16.5%	47.0%	31.71	< .001
Enhances sexual attractiveness	74.5%	57.0%	3.08	.002
Boosts self-esteem	49.0%	62.0%	2.13	.033
Is provocative	6.0%	51.0%	9.02	< .001

Note. \*No respondent chose the option "other".

enhancing self-esteem; one decade later the primary motivations shifted to enhancing sexual attractiveness and expressing one's personality (according to more than 70.0% of the respondents) (Table 2).

Perceptions of the effects of various socio-cultural aspects on decisions to obtain tattoos also diverged between the two study groups. In 2014, significantly more participants declared that tattooing was motivated by greater social tolerance (67.5% vs. 24.0%,  $p < .001$ ), easy access to tattoo procedures (66.5% vs. 9.0%,  $p < .001$ ), and the influence of the media (20.5% vs. 4.0%,  $p = .002$ ). Moreover, 4.0% of the respondents participating in the more recent survey reported other (not listed) factors conducive to tattooing, in contrast to the previous survey, in which no alternative factors were proposed ( $p < .043$ ). The influence of Western culture was believed to encourage tattooing by 25.5% of the respondents in 2014 and by 16.0% in 2004, but the difference was not statistically significant ( $p = .063$ ) (Table 3). Generally, the influence of socio-cultural factors on tattooing was more often mentioned in 2014 than 10 years before ( $p < .001$ ), when 56.0% of the respondents believed that none of those factors affected their tattooing decisions.

## RESPONDENTS' OPINIONS ABOUT TATTOOED INDIVIDUALS

In 2014, most respondents claimed that tattooed persons are average citizens (83.5%), and that opinion was significantly more frequent than in 2004 ( $p < .001$ ), even though also in the previous survey it was the most popular option (46.0%). In both surveys comparable proportions of respondents believed that tattooed individuals are members of a subculture (30.5% vs. 32.0%,  $p = .791$ ) or alcoholics or drug users (5.0% vs. 7.0%,  $p = .480$ ); also similar fractions selected the option "other", meaning they did not find an adequate description in the questionnaire (9.5% vs. 9.0%,  $p = .888$ ). Finally, in both groups similar percentages of respondents were unable to provide an answer (6.5% vs. 6.0%,  $p = .867$ ) (Table 4).

*Motivation for tattooing*

## DISCUSSION

The practice of tattooing has come a long way from primitive cultures, where it had ritual and magical significance, through criminal subcultures, in which

Table 3  
*Socio-cultural factors conducive to tattooing in both groups of respondents*

Factors	Year of study		Test statistic	<i>p</i>
	2014 <i>N</i> = 200	2004 <i>N</i> = 100		
Media influence	20.5%	4.0%	3.77	< .001
Influence of Western culture	25.5%	16.0%	1.86	.063
Increased social tolerance	67.5%	24.0%	7.12	< .001
Easy access to tattoo procedures	66.5%	9.0%	9.40	< .001
Other	4.0%	0.0%	2.03	.043
None of these socio-cultural factors affected my decision to obtain a tattoo	0.0%	56.0%	11.73	< .001

Table 4  
*Opinions about tattooed individuals*

Factors	Year of study		Test statistic	<i>p</i>
	2014 <i>N</i> = 200	2004 <i>N</i> = 100		
Media influence	83.5%	46.0%	6.75	< .001
Influence of Western culture	30.5%	32.0%	0.26	.791
Increased social tolerance	5.0%	7.0%	0.71	.480
Other	9.5%	9.0%	0.14	.888
None of these socio-cultural factors affected my decision to obtain a tattoo	6.5%	6.0%	0.17	.867

it marked group affiliation, to modern times, when it became an important element of fashion. Currently, tattoos are some of the most widespread forms of body modification and are gaining popularity among those social and occupational groups from which they were previously absent (e.g., health care workers, lawyers, managers) (Armstrong et al., 2008). With a view to determining the underlying causes of the growing fashion for body ornamentation, of great interest are data on changes in the social structure of the tattooed population as well as on motivations to obtain tattoos.

In the present study, we found a rise in the population of tattooed women over the past decade. Similar trends have been noted by other authors both in Poland and other countries, although some researchers have reported a preponderance of tattooed males or similar proportions of males and females in the tattooed population (Antoszewski, Sitek, Fijałkowska, Kasielska, & Kruk-Jeromin, 2010; Armstrong et al., 2008; Braverman, 2012; Deschesnes et al., 2006; Laumann & Derick, 2006; Makkai & McAllister, 2001; Mayers, Judelson, Moriarty, & Rundell, 2002; Pajor, Broniarczyk-Dyła, & Świtalska, 2015; Quaranta et al., 2011; Stieger, Pietschnig, Kastner, Voracek, & Swami, 2010; Stirn, 2003; Swami et al., 2012; Zarębska, 2012). According to Heywood et al. (2012), in Australia tattooed women outnumbered tattooed men among 20-29-year olds, while in the 40+ population the relative proportions were reversed.

The two groups analyzed in the present study were similar in terms of chronological age (approx. 27-28 years), as well as mean age at first tattoo (approx. 22 years). This means that in 2004 and 2014 the respondents obtained tattoos at a similar age. Interestingly, the reported age is rather high as compared to other countries; for instance, in Italy it is 17.50 years (10-26,  $SD = 2.40$ ) and in Brazil 18.40 years (8-40,  $SD = 5.40$ ) (Nishioka et al., 2002; Quaranta et al., 2011). It should be noted that age at first tattoo also has some influence on the age range of the participants. Furthermore, age at first tattoo may itself be modified by accessibility to tattoo procedures as well as national regulations concerning their legality (e.g., the minimum age criterion).

Over the studied decade, we did not find significant changes in the educational attainment of the respondents. Our findings are similar to the data reported by Pajor et al. (2015) for Polish people with body piercing and/or tattoos, with most participants having secondary education. Interestingly, according to Swami et al. (2012) tattooed individuals do not differ from non-tattooed ones in terms of their educational attainment. In the present study, the social background of individuals with body ornamentation did not change substantially over the past decade, either in terms of urbanization of their places of origin or parental education. Furthermore, other authors

have reported that parental occupation does not affect the practice of body art, which has become quite independent of one's social and cultural origins (Cegolon et al., 2010; Millner & Eichold, 2001).

The past decade saw a rise in the role of tattooing as an art form and as a way to express one's personality, promote self-enhancement, and improve sexual attractiveness. Furthermore, tattoos were increasingly perceived as body ornaments. According to the respondents questioned in 2014, the leading functions of tattooing were enhancing one's sexual attractiveness and expressing one's personality; and indeed, those functions have been noted by many researchers (Antoszewski et al., 2005, 2010; Armstrong et al., 2004; Carroll & Anderson, 2002; Forbes, 2001; Jacob, 2002; Kustner, Trave, & Renfigo, 2003; Laumann & Derick, 2006; Tiggemann & Golder, 2006). It seems that such a pronounced emphasis on these aspects of body ornamentation may be attributable to the significant proportion of females in the 2014 cohort. Women tend to value their appearance and physical attractiveness more than men, which may be explained by typical behavioral patterns characteristic of the two sexes. Women who obtain tattoos often treat them as something akin to permanent jewelry, which makes them feel more attractive, distinct, and unique. A professional tattoo may be both an artwork and a "bait" enhancing a woman's sexual attractiveness. Similar conclusions were reached by Carroll and Anderson (2002), who suggested that the esthetic effect is the main motivation for acquiring tattoos among females. Also Forbes (2001) reported that in seeking a tattoo, women are driven by esthetic reasons more often than men. Furthermore, some scholars have proposed that the practice of tattooing may constitute a form of self-acceptance therapy because conspicuous designs conceal what may be imperfect or unwanted in one's body (e.g., scars, cellulite). Atkinson (2003) described some very moving cases of women who, following a severe violence-related trauma, strove to restore dignity to the affected body parts by modifying their appearance, e.g., with tattoos. In such situations, tattoos acquired a truly therapeutic dimension. In the present study, some of the respondents also stated that tattoos enhance self-esteem, but the frequency of this opinion declined over the decade, as was the case with the view that tattoos promote self-identification. These results show that in the Polish population body ornaments are now more often acquired by individuals with a stable personal identity, for whom tattooing does not fulfill a therapeutic function in the sense of enhancing their self-worth.

According to our results, nowadays in the Polish population fewer people declare that they have obtained tattoos in order to provoke others and/or mark their subculture affiliation. In contrast, in her 2012 study Zarębska found that tattoos were mostly

linked to provocation and power manifestation derived from membership of a group with a specific cultural identity. However, it should be noted that the sample surveyed by Zarebska predominantly consisted of males. Also Kim (1991) in his work on tattooed Korean men reported that the main reasons to acquire a tattoo were fashion and the desire to mark membership in a subculture. Thus, it seems that demonstration of group affiliation through tattooing is characteristic of the male sex, and so the relative proportions of male and female respondents may affect the resulting hierarchies of tattooing motivations obtained in various studies. It should also be noted that the fashion for tattoos has spread to members of different occupational, social, and cultural groups; therefore tattooing generally ceases to mark affiliation with a particular group; indeed it is becoming a widely recognized avenue of self-expression, self-enhancement, and improvement of one's image.

Previous research showed that tattooed individuals were prone to risky and criminal behaviors. For instance, some authors have reported correlations between tattoos and the abuse of alcohol, drugs, antidepressants, and tobacco, as well as self-mutilation, high numbers of sexual partners, impulsiveness, aggression, and delinquency (Antoszewski et al., 2005; Armstrong & McConnel, 1994; Armstrong et al., 2004; Braithwaite et al., 2001; Heywood et al., 2012; Lamberger, 1996; Makkai & McAllister, 2001; Stephens, 2003). In the present study, few respondents (5.0-7.0%) perceived tattooed individuals as alcoholics or drug users. The proportion of subjects believing that persons with tattoos are "average citizens" was significantly larger in the 2014 survey, although in the previous one this was also the most popular opinion (83.5% in 2014 as compared to 46.0% in 2004). Obviously, these results may be distorted due to the fact that the participants were asked to give opinions about their own group, and so they may lack objectivity. Nevertheless, the increased percentage of responses accepting tattooed individuals may indeed suggest a change in the personality profile of such persons over the past decade.

Last but not least, it was found that in Poland the practice of tattooing is increasingly promoted by the mass media, easier access to tattoo procedures, and greater social tolerance of this form of body decoration. According to Nowak (2012), the fashion for tattoos has been fueled by TV programs featuring popular tattoo parlors and their work. Most tattoos created these days are unique designs that do not carry any of the previously widespread connotations of subculture affiliation. The effect of the media on the expansion of tattooing has also been noted by Antoszewski et al. (2005). Indeed, the fact that the mass media have imparted some new meaning to the practice of tattooing and placed it in a positive social context seems to have added to the popularity of this form of body decoration.

## CONCLUSIONS

1. Tattoos are increasingly often used by women as a form of body decoration.
2. The use among women causes that the perception of tattooing is changing and becoming less aggressive.
3. The mass media insistently promote the fashion for tattoos, which is why this form of body art is becoming more and more popular.

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