

The respondents were asked if they were tattooed. Those responding 'yes' were then questioned on the number they had, if these were done whilst out with male or female friends and where their tattoos were done. They were then asked if they regretted any of their tattoos and if they would consider removal. Further questions were asked on when their last tattoo was done. All responders, irrespective of whether they did or did not have tattoos were questioned on their opinions as to the attractiveness of tattoos to women and the attractiveness of tattoos in women.

All subjects were then asked to give their age on the questionnaire. This would allow comparison between younger and older subjects. It was decided to compare the results obtained for those aged 25 and under with those aged 26 or older.

When associations between aspects of tattooing and other factors were of interest the chi-squared test was used to assess significance.

Results

Four hundred and fifty potential subjects attended the medical centre during the study period. Of these 445 fully completed a questionnaire. Of the five men not included in the final analysis of results two completed their questionnaires in such a way that they could not be analysed and the remaining three were either themselves seriously ill or accompanying a relative who was.

Table 1
Numbers (with percentages in brackets) of tattooed soldiers.

	Age 25 or under	Age 26 or older	Total
Tattooed	95(46.1)	101(42.3)	196(44.0)
Not tattooed	111(53.9)	138(57.7)	249(56.0)
Totals	206(46.3)	239(53.7)	445

Chi-squared = 0.52, $p = 0.5$.

Table 1 shows the number of subjects in the study who admitted to being tattooed. Overall 44% of the soldiers completing the questionnaire had tattoos. Statistical analysis revealed that there were no significant differences in numbers of tattooed individuals between the two age groups.

Table 2 shows the number of tattooed soldiers responding positively to questioning about where their tattoos were done. As a soldier may have had several tattoos done in several different places these categories are not mutually exclusive. Eighty five point seven percent of tattooed subjects had one or more of their tattoos done by a person who they considered to be a recognised UK tattooist, 36.2% by a recognised tattooist abroad, 17.9% had self done tattoos and 15.3% had tattoos done by friends.

When the younger and older age groups were com-

Table 2
Origin of Tattoos. (Percentages in brackets.)

	Age 25 or under	Age 26 or over	Total
UK Tattooist	78(82.1)	90(89.1)	168(85.7)
Tattooist Abroad	21(22.1)	50(49.5)	71(36.2)
Tattooed by Self	33(34.7)	2(2.0)	35(17.9)
Tattooed by Friends	28(29.5)	2(2.0)	30(15.3)
Influence from male friends	54(56.8)	71(70.3)	125(63.8)
Influence from girls	17(17.9)	17(16.8)	34(17.3)
Done as a Dare	32(33.7)	40(39.6)	72(36.7)

pared it was noted that a higher percentage of the older age group had tattoos done abroad. Of the younger subjects 34.7% admitted to self tattooing and 29.5% to tattoos done by friends. This compared with a 2% self and 2% friend performed rate in the older age group, a significant difference.

The results of questioning about the influences on the subject's decision to become tattooed are given in Table 2. It is apparent that peer group pressure (63% of cases) plays a large part in influencing the recipient's decision. This compared with a figure of 17% who felt that girls had influenced their decision to become tattooed.

Results for those tattooed soldiers who expressed regrets at one or more of their tattoos are shown in Table 3. Overall 31.1% regretted one or more of their tattoos and this feeling was significantly more common amongst the older group. When asked if they would consider removal of any of their tattoos (Table 3) 32.1% of the subjects

Table 3
Numbers (with percentages in brackets) of tattooed soldiers expressing regrets or considering removal.

	Age 25 or under	Age 26 or older	Total
Regrets	16(16.8)	45(44.6)	61(31.1)
No Regrets	79(83.2)	56(55.4)	135(68.9)
Total	95(48.5)	101(51.5)	196
Removal Considered	18(18.9)	45(44.6)	63(32.1)
Removal Not Considered	77(81.1)	56(55.4)	133(67.9)
Totals	95(48.5)	101(51.5)	196

Chi-squared = 13.57, $p = 0.0002$.

Table 4
Relationships (with percentages in brackets) between number of tattoos/years since last tattoo and regrets.

	Regrets	No Regrets	Total
6 or more tattoos	16(33.3)	32(66.6)	48(24.5)
5 or less tattoos	45(30.4)	103(69.6)	148(75.5)
6 or more years since last tattoo	38(44.7)	47(55.3)	85(43.4)
5 or less years since last tattoo	23(20.7)	88(79.3)	111(56.6)

Relationship with 'number of tattoos': chi-squared = 0.04, p = 0.8.
 Relationship with 'years since last tattoo': chi-squared = 11.82, p = 0.0001.

felt that they would, with a significantly higher number of the older age group responding positively.

The relationship between the number of tattoos which an individual had and any feelings of regret were evaluated. A comparison between the number of years since a man's last tattoo and any expression of regret was also made. The results (Table 4) show that there was little difference in the percentage regretting their tattoos between those with six or more and those with five or less. However, significantly more men did have regrets when their tattoos had been done longer ago.

The results of the assessment of the attractiveness of tattooed women and soldiers perceptions of the attractiveness of tattoos to women (Table 5) indicate that whilst 50.1% of all respondents find tattoos on girls ugly, very significantly less do of those who are themselves tattooed. Only a very small number of soldiers felt that tattoos were attractive to women. Most (96.2%) felt that they were either irrelevant or unattractive. A significantly higher number of men without tattoos think tattoos are unattractive to women.

Discussion

This study looked at soldiers who came into a garrison medical centre during a one month period. Although no publicity was given to the trial this did give a potential for volunteer bias in the study population. The author wished to avoid as much as possible the effects of peer group pressure on the answers given. It was felt that the method chosen was the most practical way of achieving this aim. Questionnaires given to large groups of soldiers could have both increased the size of the study and eliminated volunteer bias, but given the intimacy in which soldiers live and work such a method could undoubtedly have resulted in group answers. The medical centre reception staff who supervised the distribution and collection of the questionnaires reported an absence

Table 5
The attractiveness of tattoos; a comparison between the attitudes of those tattooed and not tattooed (with percentages in brackets).

	Tattooed subject	Not tattooed subject	Total
Find tattoos in girls attractive	84(42.9)	24(9.6)	108(24.3)
Indifferent to tattoos in girls	57(29.1)	57(22.9)	114(25.6)
Find tattoos in girls ugly	55(28.1)	168(67.5)	223(50.1)
Think tattoos are attractive to girls	13(6.6)	4(1.6)	17(3.8)
Think tattoos are irrelevant to girls	151(77.0)	105(42.2)	256(57.5)
Think tattoos are not attractive to girls	32(16.3)	140(41.8)	172(38.7)

Attractiveness of tattooed girls: chi-squared = 10.13, p < 0.0001.
 Attractiveness of tattoos to girls: chi-squared = 138.02, p < 0.0001.

of peer group pressure during the completion of the forms.

The overall incidence of skin tattoos in the sample population (44%) was greater than that recorded in previous studies (1,2). The number of soldiers in the younger age group with tattoos was similar to that in the older group. Given that other studies (1) have demonstrated that the mean age of first tattooing is 19 this may suggest that despite a recent upsurge in stories about the health risks of tattoos as many younger soldiers are becoming tattooed today as in previous years.

United Kingdom based tattooists proved to be the most common performers of tattoos for the study population. This applied to both the older and younger age groups. A higher percentage (49.5% as opposed to 22.1%) of the older group had been tattooed abroad. This may indicate changing attitudes and concern about hygiene standards or may simply reflect the different opportunities for travel abroad amongst today's younger soldiers.

The term UK based recognised tattooist used in the questionnaire is of necessity a loose one. Other authors (12,13) have discussed the present widespread flouting of the Local Government Miscellaneous Provisions Act 1982 which is supposed to regulate tattoo artistry in the United Kingdom. In this study recognised was taken to

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mean an artist working for commercial gain.

The trend for self inflicted or homemade tattoos in the younger soldier should be a cause for concern. 'Amateur' tattoos are often less aesthetically pleasing than professionally performed ones and this gives the potential for a higher rate of requests for removal in the future. Removal of such tattoos may even produce its own particular difficulties (14). Instruments used in home tattooing are unlikely to be adequately sterilized and may be used on several different people presenting an increased risk of transmission of infection. Some authors (15) have raised the question of legislation against tattooists. The results of this survey suggest that a proportion of young soldiers have already been involved in amateur tattooing and legislation outlawing tattoo parlours may drive the practice underground with attendant health risks. Education about the risks involved may be a more satisfactory solution.

The influence of male friends on tattooing was felt to be over 50% in both the younger and older age groups. This evidence supports previous findings (1,8). The influence exerted by girls was shown to be much lower (17.5%). Any health education programme must address this strong influence of other young men on the peers.

This study confirmed previous work (16) which suggested that the numbers of tattoos which an individual has is not an important factor in assessing the attitudes of the subjects. A soldier with five or less tattoos seems to be no more or less likely to regret his tattoos than one with five or more.

The results from questioning concerning regrets about tattooing and requests for removal support the clinical impression that it is usually the older male who wishes to consider tattoo removal. The medical problems associated with tattoo removal have been reviewed elsewhere (11,14) and the potential number of patients involved has implications for those plastic surgery units dealing with soldiers. Some of the men who have come to regret their tattoos may be willing to provide advice to young soldiers and may be able to make an important contribution to any health education package.

Most previous work on women and tattoos has been prisoner and psychiatric patient based rather than reflecting views of the general population. This study showed that the majority of men find tattoos in women unattractive. This evidence may be of use in influencing women not to become tattooed.

The results obtained in this study were from a single group of soldiers in a single garrison. Although the author has no reason to believe that the soldiers questioned were not typical it would be unwise to extrapolate the incidence of tattoos found for the British Army as a whole. The results do, however reflect previous work with soldiers (17).

It is to be hoped that in future the present rate of tattooing in the British Army can be reduced by the combined efforts of medical staff and unit commanders.

Preventative programmes have already been described (18) and the results of this survey suggest that the education of the young soldier about the medical risks and lifelong nature of the tattoo is important. We must work as some authors have suggested, (19) to provide practical alternatives to tattooing and ensure that the soldier is fully aware of the implications of becoming tattooed.

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