ASSESSMENT OF BODY PIERCING ASSOCIATED HEALTH COMPLICATIONS AMONG YOUNG PEOPLE IN GREECE

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Περίληψη

Το body piercing, δηλαδή η διάτρηση του σώματος έχει αυξηθεί σημαντικά σε δημοτικότητα τα τελευταία χρόνια στην Ελλάδα. Επιπλοκές έχουν συχνά αναφερθεί στην ιατρική και οδοντιατρική βιβλιογραφία, αλλά έχουν υπάρξει λίγες προσπάθειες για την ποσοτικοποίηση του προβλήματος. Ο σκοπός αυτής της μελέτης είναι η αξιολόγηση των δημογραφικών και κοινωνικών παραμέτρων των ανθρώπων που έχουν υποστεί διάτρηση σώματος στην Ελλάδα, καθώς και η ανιχνεύσει επιπλοκών που συνδέονται με την υγεία. Για τη διεξαγωγή της έρευνας, ένα ερωτηματολόγιο διανεμήθηκε σε 353 άτομα με body piercings. Η στατιστική ανάλυση έγινε με τη χρήση του στατιστικού προγράμματος SPSS 19.0. Το 78.19% των συμμετεχόντων ήταν γυναίκες και το 21,81% άνδρες, με ηλικία 18-35 ετών. Στη στατιστική αξιολόγηση φαίνεται ότι οι γυναίκες προτιμούσαν να εφαρμόζουν piercings σε κοσμηματοπωλεία και ακολουθούν τις οδηγίες για μετέπειτα φροντίδα. Οι συμμετέχοντες μεταξύ 18 και 25 ετών, θα επαναλάμβαναν ευκολότερα ένα piercing. Το 70% των piercers που εργάζονται σε studio φορούσαν γάντια. Οι piercers που φορούσαν γάντια έδιναν συχνότερα γραπτές ή προφορικές οδηγίες φροντίδας. Το 72,8% των συμμετεχόντων αποφάσισαν να κάνουν piercing λόγω προσωπικών πεποιθήσεων, ενώ το 22,1% αντιμετώπισαν ψυχολογικές επιπλοκές από την οικογένειά τους. Η τοποθεσία όπου πραγματοποιείται το piercing και οι κατάλληλες συνθήκες υγιεινής είναι σαφώς πολύ σημαντικές για την εξασφάλιση ενός υγιούς αποτελέσματος. Υπάρχει επομένως ανάγκη για παροχή εκπαίδευσης και αύξηση της ευαισθητοποίησης ώστε να βοηθήσει τους ανθρώπους στην ορθή απόφασή τους να προχωρήσουν με πραγματοποίηση οποιασδήποτε τέχνης του σώματος.

Λέξεις κλειδιά: Body Piercing, Δημόσια Υγεία, Ψυχολογία, Κοινωνιολογία, Ελλάδα.

Abstract

Cosmetic body piercing has increased greatly in popularity in recent years. Complications with body piercing have often been reported in the medical and dental literature, but there have been few attempts to quantify the problem. The purpose of this study was to assess demographical and social parameters of people who have undergone body piercing in Greece and to detect the impact of associated health complications. To conduct the research, a questionnaire was formulated and distributed to 353 people with body piercings. Statistical analysis was performed using the SPSS 19.0 statistical program. 78.19% of the participants were female and 21.81% male, most of them between18-35 years old. The statistical evaluation demonstrated that women preferred

to have it done in jewelry stores and they follow the aftercare instructions. People between 18 and 25 years old more often were repeating a piercing. 70% of the piercers working in studios wore gloves. Piercers warring gloves more often gave written or oral care instructions. 72,8% of the participants reported that they decided to do the piercing because of personal beliefs while 22.1% reported stress in their family context. The place where the piercing is performed and the proper conditions for the practice of piercing are clearly very important for ensuring a healthy outcome. There is therefore a need to provide education and enhance awareness to better assist people in their decision to go ahead with body art purchases.

Key words: Body Piercing, Public Health, Psychology, Sociology, Greece.

Introduction

Cosmetic body piercing has greatly increased in popularity in recent years. It is believed that body piercing is a relatively recent trend, but ear piercing has been common to almost every culture throughout history, with a huge variety of associated legends, myths and meanings. The decoration of the body is a kind of art and has been practiced in various forms by both sexes since ancient times around the world. In the past, reasons for performing body piercing included adornment, rites of passage, religious functions, and sexual practices; nowadays, however, it has become a fashion. [1] Body piercing is a kind of body alteration, which includes stretching, implants, tattooing, scarification, branding, suspension and other body art. [2] Almost every part of the body can be pierced, but the most popular places on the body for piercing are the ears, eyebrows, nose, lips, tongue, nipple, navel and the genitals. [3]

The process of piercing the body can be done using various tools, but most frequently a medical needle is used. The point selected, after disinfection, is immobilized with specific forceps and the needle breaks the protective barrier of the skin. [2] While the needle is still in the body, the jewelry is inserted through the opening from the back of the needle to be mounted and the needle is removed, simultaneously.

The most popular method is the piercing gun. However, the safety of this method has been challenged, as it was originally intended and designed for livestock tagging. [4] The Association of Professional Piercers (APP) recommends not using the piercing gun for any piercing, as they consider that reusable ear piercing guns can put clients in direct contact with the blood and body fluids of previous clients, and can **cause significant tissue damage**. [5]

The presence of piercings in the oral/perioral cavity can cause infection, speech impediment, nerve damage, tissue overgrowth, mucosal lesions and trauma, hyperplastic scarring, traumatic ulcer and chipping of teeth. [6], [7] Changes to dental structure, such as fractures or detachment of spicules of the enamel, can be caused by parafunctional habits such as biting or pushing or by any type of play with piercing jewelry. [8] Body piercing also involves risk of bacterial infection, particularly from *Staphylococcus aureus*, *Streptococcus* A group and *Pseudomonas spp*. [9] Non-sterile piercing techniques and poor hygiene contribute significantly to the increased risk of infection; so choosing the right piercer and jewelry dramatically increases chances for uneventful healing. [2] Viral infections include hepatitis B, hepatitis C and possibly HIV, although since 2009 there have been no documented cases of HIV due to piercing. [1]

Teenagers with body art see themselves as less well integrated in school than their peers who do not have piercing or other body art. They feel that the support they get from

their parents and family is less than their peers without body art. [10] Similarly, having body art is strongly associated with health-compromising behavior. Some types of non-traditional piercings are inappropriate attire, for example, for physicians; some piercings negatively affect perceived competency and trustworthiness. [11] The psychosocial factors of body modification impact the biological and medical complications of body modification. Exposure to a psychosocial stressor may be associated with obtaining a body modification. The major reasons for body modification practices in the German population appear to be negatively perceived conditions of life, reduced social integration, and increased sensation-seeking behavior. [12]

Purpose

The purpose of the study was to assess demographical and social parameters of people with body piercing in Greece and to detect the impact of health complications related to it including psychological and social problems.

Methods

To conduct the research, a questionnaire was designed and addressed to people with piercings. Earlobe piercings were included, unlikely other studies in the literature. The reason was because in Greece earlobe piercing is not as socially accepted for men as in many other European countries. The questionnaire was a self-type questionnaire and was distributed by e-mail, through social media, and manually. The sampling was performed using the lattice methodology. The survey was carried out December 2013 to December 2014.

The questionnaire included open format questions, closed-ended questions and open-ended questions. The questions included demographic characteristics which are gender, age, marital status, origin, and educational level. Questions also included the part of the body that was pierced, the number of piercings, the place/studio where the piercing was performed, the hygiene conditions, and any physical and psychological complications that may have arisen as a result of the piercing.

Statistical analysis was performed using the SPSS 19.0 statistical program. The data were analyzed statistically using the chi-square test, and the significance level was set at $p \leq 0,05$.

Results

Demography

Table 1 shows that most respondents were students' women aged 18-25. Most of respondents were single or in a relationship originated from Greece and live in the center of Athens. Most respondents did their first or only piercing at age <18 years and the last piercing at age 18-25 years. Most respondents have 2-5 piercings, the most popular body part being the nose.

Location of the application

Most respondents had the piercing done in a specialist piercing studio 72,6% (252), while 49,6% (172) in a jewelry store, 14,4% (50) at home and 1,2% (4) in various places. 90,8% (316) of the participants had it applied by a professional piercer while 22,4% (78) by an amateur piercer.

Position of the application

According to Table 2, a piercing gun is used primarily in the earlobe, ear flap and nose. In cases of piercing done with a needle, 94,6% (261) said that the needle was new and was opened in front of them, while 5,4% (15) responded negatively. Of those who had the piercing done by a professional piercer, 80,5% (269) said that the piercer wore gloves, while 19,5% (65) said that the piercer did not wear gloves.
Table 3 shows that most of respondents stated that they were given aftercare instructions and followed them. Most of respondents stated that they did not feel any sign of discomfort during the piercing process and did not need medication or hospital admission, as well as, have never faced any kind of psychological complications.
Table 4 indicates the kinds of complications in anatomical pierced sites. Of the total of 345 respondents for pierced ears, 174 said they encountered some kind of complication. Of the 183 answers for pierced nose, 70 said they encountered some kind of complication. Of the 88 responses for pierced navel, 55 encountered complications. Of the 123 answers for pierced lips, 35 encountered complications. Of the 61 responses for pierced tongue, 28 encountered complications. Of the 38 responses for pierced eyebrow, 14 encountered complications, and of the 187 responses for pierced nipple/ tragus/ sublingual/ stern/ smiley/ septum, 22 reported some kind of complication. The questionnaire did not elicit information about when piercings were performed or when complications occurred.
72,8% (252) of respondents took the decision for a piercing because of personal beliefs, 34,1% (118) because they consider it as a body decoration which would increase their confidence, 9,5% (33) because of influence related to culture, 8,4% (29) because of fashion, 6,4% (22) because of influence that stemmed from social interactions, 0,6% (2) because of religious beliefs and 1,7% (6) for various other reasons.

Statistical analysis

As shown in Table 5, gender is related to the number of piercings, since it appears that women have more piercings than men (p=000). Women apply more piercings than men in the ages between 18 and 25 years (p=023). Women followed the instructions given to them for after-piercing care, unlike men whose positive responses were less, or even negative (p=002). Women, unlike men, preferred to apply their piercings at jewelry stores (p=000), and the most popular reason for applying a piercing is Beauty/Increased confidence (p=001). Redness in the ears was more frequent in women (p=025), as well as itching sensation (p=039), as no male respondents reported itching. Also, no male respondents showed symptoms in the nose (p=015) or the navel (p=026), as piercing of these body parts is mainly preferred by women.
As indicated in Table 5, the age of respondents is related to the repetition of the piercing process. Respondents aged 18 to 25 years (p=034) as well as respondents who did piercing for perceived Beauty/Increasing confidence reasons (p=017) would more easily repeat the piercing process. A significant correlation is the place where the piercing was done with the piercer wearing gloves. As indicated, 70,0% (231) of piercers in specialist piercing studios wore gloves (p=000), while in jewelry stores the percentage of the piercers who wore gloves was 32,42% (107), (p=000).
Also, those who gave positive responses regarding use of gloves gave negative responses regarding medication or hospital admission (p=008). The use of gloves by piercers is related to oral or written care instructions, since it appears that piercers who wear gloves gave oral (p=000) or written care instructions (p=014), while those who

did not wear gloves did not give instructions at all (p=000). Those who did ear, nose and tongue piercing in a studio do not appear to have had complications like those who did ear and nose piercing in a jewelry store. In particular, of those who did nose piercing in a specialist piercing studio, 5,0% (7) presented redness at this point (p=005), while 11,43% (16) of those who did it in a jeweler presented this problem (p=004). Also, performance of piercing in a jeweler's is associated with the onset of allergy (p=030), redness (p=000), pruritus (p=001) or infection (p=037) on the ears, as opposed to piercing in a specialist studio; the same applies to swelling (p=020) at the point of the nose.

According to the results, it seems that gender is not related to the repetition of the piercing process, to feeling any sign of discomfort or to psychological complications. Repeating the process of piercing is independent of marital status and educational level of the participants, as to whether or not care instructions are given, whether or not such instructions (when given) are followed, and whether or not the piercer wears gloves. The correlation between the age of at which the first or single piercing was done and the educational level had no statistically significant effect, such as correlation of age of the respondents and encountering any psychological complications. Last, the age at which the last piercing was done appears to be independent of repeating the process of piercing, while piercing in general does not appear to be related to place of origin/ socio-economic background.

Discussion

In this study according to the answers of the 353 respondents it appears that women do more piercing (p=000). Similar results were found in other studies in the bibliography, such as in a study by Mayers et al, 2002: here the total number of students was 454, and the results of the chi-square test analysis indicated that female students were more likely to be pierced than males (p=002). [13] A similar result was reported also in the study of Carroll et al, 2002. [14] Most respondents were women aged 18-25 years. A similar age distribution was found in a study in England where 46,2% (42.0 to 50.5) of the respondents were pierced women aged 16-24 years. [15] Skegg et al, 2007, noted that piercing was more common among women rated as having low constraint or high negative emotionality and was less common among those with high positive emotionality. [16]

Women more often followed the care instructions, unlike men whose positive responses were less or who even presented negative responses, suggesting that women have a more responsible attitude to piercing than men. Women, in contrast with men, preferred to do their piercing at jewelry stores (p=000), where the process is carried out using a piercing gun. The earlobe, ear flap and nose are the preferred body part for piercing with a piercing gun in a jeweler's. An Italian survey, in contrast with our study, mentions that men were less likely to go to a certified body art studio (OR=0,56; 0,48, 0,66). [17]

72,6% (252) of respondents had the piercing done in a specialist piercing studio and 90,8% (316) did the piercing with a professional piercer. These results are similar to a survey in Brazil, where of 58 private medical school students, aged 24 ± 3 years, 84,5% did piercing in a specialized studio and 63,8% did piercing with a professional piercer [18]; in England, of 10,503 respondents, 80% did piercing in specialized studios [15]; also, according to a Canadian study of 2,180 students aged 12 to 18 years, most stated of that a professional in a studio performed their body modification. [19]

A strong positive correlation exists between the place where piercing was done and the tendency of the piercer to wear gloves. According to the results, 70,0% (231) of the piercers in specialized studios wore gloves (p=000), while in jewelry stores gloves were worn by only 32,42% (107) of the piercers (p=000). Those who responded positively to the piercer's use of gloves, responded negatively to the need for treatment or hospitalization (p=008). This is a very significant result, indicating that the use of gloves protects people from contamination and infection during the piercing process.
The use of gloves by piercers is also correlated to the provision of care instructions. It appears that piercers who wore gloves gave written (p=000) or oral care instructions (p=014), while those who did not wear gloves did not give any instructions (p=000). It appears also that piercers, as mentioned above, working in a studio are more likely to wear gloves and give care instructions, in contrast with jewelers. Similar results were reported for Canada where, among 2,180 students, aged 12-18, attending various schools, when piercing was done by a professional piercer, care instructions were given. [19]

The carrying out of piercing in a jewelry store is correlated to the onset of allergy (p=030), redness (p=000), pruritus (p=001) and infection (p=037) on the ears as opposed to piercing in a studio, as well as swelling (p=020) at the point of the nose. According to Bone et al, 2008, swelling, infection and bleeding are the most common complications in tongue (50%), genital (45%) and nipple (38%) piercings. [15] According to Purim et al, in a 2014 survey, 86,2% (50) females age 24 ± 3 years in Brazil, presented significantly higher frequency of hypertrophic scarring, pain, swelling and infection ($p < 0.05$) in the case of navel piercing. [18]
Accordingly, an organized and specialized studio is clearly safer than a jewelry store, as the piercer in the jewelry store does not carry out the piercing on a professional basis. Piercing in a jewelry store is parallel work and not competence, as opposed to a professional piercer in a studio where he/she has been trained and specialized. The policy of a professional studio regarding hygiene rules is stricter and more effective than in a jewelry store.
This results in a statistical reduction of post-piercing heath problems that may affect the customer. Furthermore, similar results were found in the survey of Bone et al, 2008, in England, where serious complications leading to hospitalization were more likely to happen in piercings performed by an amateur than those that were done by a professional (p=0,01). Nearly one in hundred (1/100) led to hospitalization. [15] In our survey only one hospitalization was reported (0,3%, 1). This difference may be due to the smaller sample (353) compared to the study of Bone et al, 2008. (10.503). [15]
Those who have performed ear, nose and tongue piercing in a studio do not appear to present such intense complications, as compared with those who have performed the ear and nose piercing in a jewelry store. This is associated with the tool that was implemented, because in studios a sterilized medical needle is used while in jewelry stores a piercing gun. Indeed, in the case of those who did nose piercing in a studio, 5,0% (7) showed redness at this point (p=005), while 11,43% (16) of those who did it in a jeweler's presented the same problem (p=004).
In our study, 72,8% of the participants (252) stated that the reason for doing piercing was because of individual expression/personal beliefs. The same response arises from a survey in Alabama, USA, in which 79 pierced participants represented a wide age range – between 19 and 55. [20] In our study, the piercing was not associated with alcoholism, unlike the survey of Brooks et al, 2003, in Boston, USA where among 210

adolescents, 16 years old in average, 63% female, body modification was associated with self-reported alcoholism and the use of drugs. [21]
Although in our research no serious health complications were reported beyond the expected signs in the normal course of healing after piercing, cases have been reported worldwide. In 2013, a 19-year-old girl was found to be infected with *Mycobacterium fortuitum* as a result of transdermal piercing. Other reported cases of atypical mycobacterial infected piercings include a 17-year-old female with nipple piercings who became infected with *M. abscessus*, a 22-year-old female with a navel piercing who became infected with *M. chelonae*, a 12-year-old female with an eyebrow piercing who became infected with *M. flavescens*, and a 35-year-old female with nipple piercings who became infected with *M. holsaticum*, *M. agri*, and *M. brumae*. [22]

Conclusion

While this survey does not reveal findings of particular complications, this should not lead to complacency – rather it reveals the need to remain vigilant in respect of observing strict hygiene rules at the place where body modification is performed. The aftercare instructions that are given must be followed at all times, as personal well being should never be neglected. Anyone who decides to carry out a body modification should be aware of the aftercare that is required and assume the respective responsibility. Health education programs should focus on secondary school pupils so that they are aware of piercing and its complications from an early age and how to protect their personal health and integrity should they decide to go ahead with piercing.

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Tables

Table 1. Demographic data of the responders .

Gender	
Women	78,19% (276)
Men	21,81% (77)
Age	
<18 years	3,97% (68)
18 - 25 years	75,35% (266)
26 - 35 years	19,26% (68)
>36 years	1,48% (5)
Marital status	
Single or in a relationship	92,88% (326)
Married or civil partners	5,98% (21)
Divorced	1,14% (4)
Origin	
Greece	89,8% (317)
Albania	2,5% (9)
Various other European countries	1,1% (4)
Cyprus	0,6% (2)
Other	5,9% (21)
Residence	
In center of Athens	25,51% (87)
In the lower-income western suburbs of Athens	23,17% (79)
In the wealthier northern suburbs of Athens	18.18% (62)
In the southern suburbs of Athens	14,96% (51)
In the eastern suburbs of Athens	5,57% (19)
Other parts of Greece	12,61% (43)
Current employment	
Students	59,65% (207)
Working people	27,67% (96)
Unemployed	9,22% (32)
School pupils	3,17% (11)
Housewives	0,29% (1)
Age of applying the first or single piercing	
<18 years	78,51% (274)
18 - 25 years	19,77% (69)
26 - 35 years	1,43% (5)
>36 years	0,29% (1)
Age of applying the last piercing	
<18 years	25,15% (85)
18 - 25 years	64,79% (219)
26 - 35 years	8,58% (29)
>36 years	1,48% (5)
Anatomical sites of piercings	
Nose	53,5% (183)
Earlobe	52,6% (180)
Ear flap	48,2% (165)
Lips	36,0% (123)

Navel	25,7% (88)
Tragus	18,7% (64)
Tongue	17,8% (61)
Septum	12,3% (42)
Eyebrow	11,1% (38)
Nipple	9,9% (34)
Sublingual	6,7% (23)
Smiley piercing	5,0% (17)
Genitals	2,9% (10)
Elsewhere	2,0% (7)
Cheek	1,2% (4)
Repetition of piercing process	
Yes	60,2% (209)
Maybe	29,7% (103)
No	10,1% (35)

Table 2. Data according to the tools used for the piercings application at each site.

	Use of piercing needle (N)	Percent of Cases	Use of piercing gun (N)	Percent of Cases
Earlobe	53	22,1%	238	87,2%
Ear flap	54	22,5%	107	39,2%
Tragus	45	18,8%	21	7,7%
Eyebrow	34	14,2%	6	2,2%
Nose	61	25,4%	119	43,6%
Septum	39	16,3%	1	0,4%
Lips	95	39,6%	14	5,1%
Smiley piercing	17	7,1%	1	0,4%
Sublingual	19	7,9%	-	-
Tongue	58	24,2%	3	1,1%
Cheek	3	1,3%	-	-
Nipple	28	11,7%	-	-
Navel	77	32,1%	10	3,7%
Genitals	9	3,8%	1	0,4%
Elsewhere	12	5,0%	1	0,4%
Total	604	251,7%	522	191,2%

Table 3. Data according to aftercare instructions given by the piercers, and the responders feel of discomfort and other psychological complications.

Aftercare instructions given	
Oral aftercare instructions	53,6% (184)
Written aftercare instructions	27,1% (93)
Written and oral aftercare instructions	13,7% (47)
No aftercare instructions	5,5% (19)
Follow the aftercare instructions	
Followed them	77,2% (258)
Followed them more or less	21,9% (73)
Did not follow them	0,9% (3)
Feel of discomfort	
No sign of discomfort during the piercing process	84,8% (296)
Felt discomfort after the piercing process	9,5% (33)
Felt discomfort during the piercing process	3,7% (13)
Felt discomfort before and after the application of the piercing	2,0% (7)
Medication or Hospitalization	
No need medication or hospital admission	90,2% (286)
Had to take some medication	9,5% (30)
Hospitalization	0,4% (1)
Psychological complications	
Have never faced any kind of psychological complications	68,2% (230)
Have faced some kind of psychological complications in their family	22,3% (75)
Have faced some kind of psychological complications in workplace	11,6% (39)
Have faced stress deriving from the reactions of friends	4,2% (14)
Have faced some kind of psychological complications from various another factors	1,8% (6)

Table 4. Complications in various bodies pierced sites.

Complication Frequencies

		Responses		
		N	Percent	Percent of Cases
Complications in anatomical pierced sites.[a]	Ears (Allergic reaction to the jewelry)	15	3,8%	9,9%
	Ears (Swelling)	38	9,5%	25,2%
	Ears (Redness)	32	8,0%	21,2%
	Ears (Pain)	18	4,5%	11,9%
	Ears (Tingling sensation)	15	3,8%	9,9%
	Ears (Secretion of pus)	31	7,8%	20,5%
	Ears (Infection)	17	4,3%	11,3%
	Ears (Other)	8	2,0%	5,3%
	Nose (Swelling)	10	2,5%	6,6%
	Nose (Redness)	18	4,5%	11,9%
	Nose (Secretion of pus)	22	5,5%	14,6%
	Nose (Other)	20	5,0%	13,2%
	Navel (Redness)	12	3,0%	7,9%
	Navel (Secretion of pus)	18	4,5%	11,9%
	Navel (Infection)	6	1,5%	4,0%
	Navel (Other)	19	4,8%	12,6%
	Lips (Swelling)	11	2,8%	7,3%
	Lips (Redness)	5	1,3%	3,3%
	Lips (Secretion of pus)	6	1,5%	4,0%
	Lips (Other)	13	3,3%	8,6%
	Tongue (Swelling)	12	3,0%	7,9%
	Tongue (Difficulty speaking)	7	1,8%	4,6%
	Tongue (Other)	9	2,3%	6,0%
	Eyebrow (Swelling)	6	1,5%	4,0%
	Eyebrow (Other)	8	2,0%	5,3%
	Nipple / Tragus/ Sublingual/ Stern/ Smiley/ Septum	22	5,5%	14,6%
Total		398	100,0%	263,6%

Table 5. Correlations between the responders age and sex, and various parameters regarding the piercing procedures.

Chi-Square Tests			
Sex* Number of piercing			
	Value	**Df**	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	25,348[a]	3	,000
Likelihood Ratio	31,573	3	,000
Linear-by-Linear Association	24,012	1	,000
N of Valid Cases	342		
Sex * Age of application of the first or single piercing			
	Value	**Df**	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	7,507[a]	2	,023

Likelihood Ratio	6,754	2	,034
Linear-by-Linear Association	7,330	1	,007
N of Valid Cases	349		
Sex * Follow the written instructions given			
	Value	**df**	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	12,891[a]	2	,002
Likelihood Ratio	11,209	2	,004
Linear-by-Linear Association	,004	1	,951
N of Valid Cases	334		
Sex * Place where a piercing was applied			
	Value	**df**	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	23,977[a]	1	,000
Continuity Correction[b]	22,710	1	,000
Likelihood Ratio	24,951	1	,000
Fisher's Exact Test			
Linear-by-Linear Association	23,907	1	,000
N of Valid Cases	347		
Sex * Reason of a piercing application			
Beauty/ Increasing confidence			
	Value	**df**	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	10,154[a]	1	,001
Continuity Correction[b]	9,296	1	,002
Likelihood Ratio	10,964	1	,001
Fisher's Exact Test			
Linear-by-Linear Association	10,125	1	,001
N of Valid Cases	346		
Age * Repetition of piercing process			
	Value	4	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	10,417[a]	1	,034
Likelihood Ratio	9,112		,058
Linear-by-Linear Association	2,149	1	,143
N of Valid Cases	347		
Reason for applying a piercing* Repetition of piercing process			
Individual expression / Personal Beliefs			
	Value	2	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	8,138[a]	1	,017
Likelihood Ratio	7,622		,022
Linear-by-Linear Association	7,508	1	,006
N of Valid Cases	344		
Part of body where piercing was done * Piercer wearing gloves			
In a specialist piercing studio			
	Value	1	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	106,550[a]	1	,000
Continuity Correction[b]	103,249		,000
Likelihood Ratio	95,134	1	,000
Fisher's Exact Test			
Linear-by-Linear Association	106,227	1	,000
N of Valid Cases	330	**df**	
In a jeweler's			
	Value	1	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	44,842[a]	1	,000
Continuity Correction[b]	42,974		,000

Likelihood Ratio	49,028	1	,000
Fisher's Exact Test			
Linear-by-Linear Association	44,706	1	,000
N of Valid Cases	330	**df**	
Piercer wears gloves * Medication or hospital admission			
	Value	2	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	9,661[a]	1	,008
Likelihood Ratio	11,124		,004
Linear-by-Linear Association	4,943	1	,026
N of Valid Cases	302		
Piercer wears gloves * Post-piercing care instructions given			
Written care instructions			
	Value	1	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	46,083[a]	1	,000
Continuity Correction[b]	44,200	1	,000
Likelihood Ratio	57,066		,000
Linear-by-Linear Association	45,945	1	,000
N of Valid Cases	332	**df**	
Oral care instructions			
	Value	1	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	6,034[a]	1	,014
Continuity Correction[b]	5,332	1	,021
Likelihood Ratio	6,458		,011
Linear-by-Linear Association	6,016	1	,014
N of Valid Cases	332	**df**	
No care instructions			
	Value	1	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	23,175[a]	1	,000
Continuity Correction[b]	20,252	1	,000
Likelihood Ratio	17,643		,000
Linear-by-Linear Association	23,105	1	,000
N of Valid Cases	332		
Complication at anatomical pierced sites * Body part where piercing was done			
In a specialist piercing studio – Nose (Redness)			
	Value	2	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	10,558[a]	1	,005
Likelihood Ratio	9,846		,007
Linear-by-Linear Association	10,420	1	,001
N of Valid Cases	141	**df**	
In a jeweler's – Nose (Redness)			
	Value	2	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	10,815[a]	1	,004
Likelihood Ratio	12,614		,002
Linear-by-Linear Association			,005
N of Valid Cases			