

Research Article

A Cross-Sectional Study to Analyse the Impact of OTT Platforms on Body Modification Choices and Cognizance of Associated Risks

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Received: 13 March 2023/ Accepted: 11 May 2023 / Published online: 24 July 2023

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Abstract

The objective of this study was to assess the prevalence of Over-The-Top (OTT) users and the impact of OTT platforms on their body modification choices (hair colouring, body tattooing and body piercing). It was also aimed to analyse awareness about the medical risks or complications associated with these choices. An online survey was conducted for 3 months (November, 21 to January, 22) predominantly in Delhi, Haryana, Uttar Pradesh and minorly in other states of India. The variables considered in the study were demographics, choice of OTT platforms and time spent on them as viewers, characteristics of hair colouring, body tattoos and piercings, decision-making process before opting for such body modification choices, and knowledge or awareness about the risks associated with them. The Chi-square test was used for testing intergroup comparisons. A positive correlation was found between the time spent on OTT platforms and the level of anxiety or restlessness felt by respondents when they were not able to watch the content on such platforms. A positive correlation was also found between the time spent on OTT platforms and the inspiration taken by the respondents from them while deciding on their next look ($r = 0.094$). Based on the results obtained from the study, it was found that the prevalence of OTT platforms has gained immense popularity, and 83.6% of respondents were found to be OTT users. Interestingly, 89.6% and 75% of the respondents were aware of the health risks associated with body modification choices like hair colouring and body tattooing, respectively.

Keywords: Over-The-Top (OTT), hair colouring, body tattooing, body piercing, body modifications, medical risks

Introduction

Updated technology, access to a good internet connection, and viewing devices have revolutionised the lifestyle and entertainment choices of the viewers. Concomitantly, the

viewership and popularity of Over-The-Top (OTT) platforms have gained momentum in a short period of time, especially during the COVID-19 period [1]. OTT platforms essentially use wireless broadband connectivity and serve as an instant source of entertainment. These are the key force behind various fashion trends prevailing in society, wherein fictional characters from movies and web series are prime sources of inspiration. This relationship is not new and dates back to the time when people used to get bell-bottom pants and long hair in the 1970s, just so as to copy their favourite movie stars [2]. Earlier, the exposure was region-specific and the general population had access only to local entertainment content. The onset of globalization in the late 1990s witnessed a dramatic increase in the number of people inspired by celebrities and fictional characters across the globe [3]. The progression of technology to watch entertainment content from VHS, DVDs, Blu-rays, and disc rental services, to online streaming or Video on Demand (VoD), including the recent OTT platforms, has provided unlimited freedom to customers [4]. Viewers can watch the video material on any Internet-connected device, such as a smart TV, laptop, or even a smartphone, with considerable liberty of time, place, and privacy. Furthermore, OTT platforms are customer-specific: from selecting a genre to scheduling a time to watch a specific program, these platforms not only cater to people of various demographics and ethnicities, but they frequently act as mediators between multiple cultures and values [5]. These newly learnt traditions and habits can often be seen being incorporated into our cultures. In order to look more like the western characters, people get their hair coloured in shades of blonde [6]. With the recent exposure to Korean, Chinese, Japanese dramas and Anime, people are getting inclined to try on vibrant hair colours like red, blue, green, and purple. While the art of tattoo making and body piercing is not new to India, it has mostly been a tradition amongst the tribals and rural communities. Tattooing and body piercing, on the other hand, are quickly becoming mainstream fashion practices as a result of their glorification by the OTT community [7]. Also, the choice of unconventional body piercings, in contrast to the conventional piercings on ears and nostrils, is becoming popular among young population. Thus, it became important to study the impact of OTT platforms, which have become a chief driving force towards the growing social isolation among people and the emerging trends of body modifications (hair colouring, body

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eISSN: 2583-5327

piercing, and tattoo making) among people of different age groups. It is also important to study whether people are conscious of the detrimental effects associated with above ongoing fashion trends in our society.

Methodology

Sample size and data collection

A random online survey was conducted during a 3-month period from November, 2021 to January, 2022 predominantly for people residing in Delhi, Haryana and Uttar Pradesh and minorly circulated in other states of India. The Google form was primarily circulated among college students and later with acquaintances/extended social circles. A total of 703 responses were collected, and the majority of the responses were obtained from female students. The participants were assured of confidentiality and their consent was taken.

Survey questionnaire

A uniform bilingual (English and Hindi) questionnaire, consisting of two sections and 34 close-ended questions, was prepared as a Google form and shared online via different platforms like Gmail, WhatsApp, Instagram, and other social media handles. The questionnaire was designed to obtain information about the prevalence of OTT platforms, the impact of OTT on mental health, and body modification (hair colour/piercing/tattooing) choices and the awareness regarding their side effects. The impact of OTT on the expenditure and notion of people with respect to the tinge of hair, the body part for tattooing and the material for body piercing was also studied.

Data analysis

Continuous variables were presented as the mean/standard deviation, while categorical variables were presented as the number or percentage of respondents. The collected

data was compiled and analysed using MS Excel. A chi-square test was also performed to study the level of significance with respect to the impact of OTT on hair colouring, body tattooing, and body piercing. Results were considered significant for significance values lower than 0.05 ($p < 0.05$).

Communicative value

To determine whether participants (OTT users) were aware that hair colouring and body tattoos may embed harmful chemicals into their systems and cause skin abnormalities, communicative value was measured by several statements. Each of these statements were followed by a Likert type scale. Higher scores indicated higher levels of preference.

Exclusion criteria

Participants who were not the OTT user, excluded from the study.

Results

Study of Socio-Demographic Variables

A total of 703 responses were received from different parts of India, out of which 79.08% of respondents belonged to states of Delhi, Uttar Pradesh and Haryana. The maximum number of respondents in the present study were females (82.07%) and followed by males (17.07). 81.08% of responses were recorded from students only, and 77.67% of participants were from science background (Table 1).

The prevalence of OTT users

In the present survey, the prevalence of OTT users was 83.6% ($n = 588$) and it was considered for further analysis. The remaining 16.4% ($n = 115$) did not watch content on

Table 1: Sociodemographic details of respondents

Question	Parameter	Number (n)	Percentage (%)
State, Union Territory you belong to / आप जिस राज्य;संघ राज्य क्षेत्र से संबंधित हैं	Delhi, Haryana and Uttar Pradesh	556	79.09
	Other States	147	20.91
	Total	703	100
Gender/ लिंग	Male	120	17.07
	Female	577	82.07
	Others	2	0.28
	Prefer not to say	4	0.58
	Total	703	100
Age Group/ आयु वर्ग	11-20 Years	491	69.84
	21-30 Years	96	13.65
	31-40 Years	61	8.68
	41-50 Years	43	6.12
	51 Years and above	12	1.71
	Total	703	100
Occupation/ पेशा	Student	570	81.08
	Government Service	30	4.27
	Private Job	62	9.82
	Business	13	1.85
	Home maker/ Housewife	25	3.56
	Unemployed	1	0.14
	Retired	2	0.28
	Total	703	100
Educational Qualification/ शैक्षिक योग्यता	Senior Secondary	336	47.79
	Graduate	221	31.44
	Post Graduate	91	12.94
	Doctorate/ PhD	17	2.42
	Others	38	5.41
	Total	703	100
Field of academics/ interest:/ शिक्षाविदों / रुचि के क्षेत्र:	Science	546	77.67
	Commerce	70	9.96
	Humanities/ Arts	69	9.82
	Others	18	2.55
	Total	703	100

OTT platforms and were excluded from the analysis. Subjects watched content on multiple OTT platforms and the most popular was Amazon Prime (59.4%), followed by Netflix (58.3%), and HOTSTAR (51.7%). The data also revealed that people primarily watched content that falls into the genres of comedy (72.4%), documentaries

(50%), action/horror (49.1%), and romance (41.7%) (Table 2). This trend of genre selection gives clarity to the popularity of Amazon Prime and Netflix, as these platforms feature many light-hearted comedies and iconic movies. Both the platforms also roll out their own original content across various genres.

Table 2: Prevalence of OTT users

Question	Parameter	Number	Percentage/ %
Do you watch entertainment-related content on OTT platform (like Netflix, Disney Hot star, Amazon Prime, YouTube etc.)? /क्या आप ओटीटी प्लेटफॉर्म (जैसे नेटफ्लिक्स, डिज़्नी हॉट स्टार, अमेज़ॉन प्राइम, यूट्यूब आदि) पर मनोरंजन से संबंधित सामग्री देखते हैं?	Yes	588	83.6
	No	115	16.4
	Total	703	100
Which OTT platforms do you prefer? (Select all that apply)/आप कौन से ओटीटी प्लेटफॉर्म पसंद करते हैं? (लागू होने वाले सभी का चयन करें) <i>(Respondents were able to select more than one option)</i>	Amazon Prime	349	59.4
	Netflix	343	58.3
	Hotstar	304	51.7
	YouTube Red	271	46.1
	Sony Liv	112	19
	Crunchy Roll	21	3.6
	Others	111	18.9
What genre do you prefer to watch on your OTT platform? (Select all that apply)/आप अपने ओटीटी प्लेटफॉर्म पर किस प्रकार की सामग्री को देखना पसंद करते हैं? (लागू होने वाले सभी का चयन करें) <i>(Respondents were able to select more than one option)</i>	Comedy	426	72.4
	Documentaries/ Science Fiction	294	50
	Horror,Action	289	49.1
	Romance	245	41.7
	Reality Shows	231	39.3
	Korean Drama/ Japanese Drama/ Chinese Drama	143	24.3
	Classics	134	22.8
	Others	128	21.8
	Anime	107	18.2

Impact of binge-watching of OTT

The availability of unlimited content makes the users habitual and they spend a lot of time on OTT platforms, which may further impact their social interaction. In the present survey, it was observed that a high number of the respondents (n = 242, 41.15%) watched content on OTT platforms for 60-120 minutes, and 9.52% (n = 56) were found to be spending more than three hours on these

platforms. In comparison to males (7.0%, n = 7), we found that 9.7% (n = 47) of females spend more than 3 hours per day on OTT binge-watching. Interestingly, a positive correlation was found between gender and the amount of time spent on watching the programmes on OTT platforms (r = 0.058) However, no statistically significant association between these two variables (p value of 0.69) was discovered (Table 3).

Table 3: Number of respondents with respect to gender watching OTT content in a day

Gender	0-1hr	1-2 hr	2-3 hr	>3hr	Grand Total
Male	34	41	18	7	100
Female	141	200	95	47	483
Others	0	1	0	0	1
Prefer not to say	2	0	0	2	4
Number (n)	177	242	113	56	588
Percentage (%)	30.10	41.15	19.21	9.52	100

To find out if the respondents felt anxious or restless when they were not able to watch content on OTT (due to technical or personal reasons), the responses were again scored on a 3-point scale. The mean of the sample was 1.33 (SD = 0.64). 9.35 % (n = 55) felt disturbed and anxious when they were unable to watch the OTT content, resulting in an increase in mental stress. However, the

majority (75.65%, n = 445) users remained unaffected even if they were not able to watch OTT content. A positive correlation was found between the time spent on OTT platforms and the level of anxiety or restlessness when the respondents were not able to watch OTT content (r = 0.18 and p = 0.0005) (Table 4).

Table 4. Answers related to assess mental health status due to the time spent on OTT platforms

Time spent on OTT platforms in a day	Do you feel anxious or restless when you are not able to watch content on OTT?				p value*
	No	Sometimes	Yes	Grand Total	
0 to 1 hour	149	17	11	177	0.0005
1 to 2 hours	184	38	20	242	
2 to 3 hours	80	22	11	113	
More than 3 hours	32	11	13	56	
Number (n)	445	88	55	588	
Percentage (%)	75.65	14.96	9.35	100	

*chi squared test

To determine whether respondents (OTT users) preferred to watch OTT content even when they were in social gatherings, a communicative value was scored on a 3-point Likert type scale. The mean of the sample was 1.36 (SD = 0.62). From the present survey, 7.88% (n = 46) of

the respondents were found to be isolated in the world of OTT completely, followed by 119 (20.23%) who are flexible and watch content sometimes in social gatherings (Table 5).

Table 5: Impact of watching OTT Platforms

Question	Parameter	Number (n)	Percentage (%)
Do you prefer to watch the content on OTT platform even when you are in a social gathering (in parties/ meetings etc.)?/क्या आप तब भी ओटीटी प्लेटफॉर्म पर सामग्री देखना पसंद करते हैं, जब आप किसी सामाजिक सभा (पार्टियों/बैठकों आदि में) में होते हैं?	Yes	46	7.88
	No	423	71.93
	Sometimes	119	20.23
	Total	588	100
What is the most likable part of the content that is available on OTT Platforms?/ओटीटी प्लेटफॉर्म पर उपलब्ध सामग्री का सबसे पसंदीदा हिस्सा क्या है? <i>(Respondents were able to select more than one option)</i>	Storyline	481	81.80
	Dressing sense of characters	162	27.55
	Celebrities involved	147	25
	Other reasons	127	21.59
	Characters' hair colour	39	6.63
	Characters' tattoos	19	3.23
	Characters' body piercings	16	2.72

This data points towards the growing interest of people towards the content available on OTT, which may be affecting their mental state as they are unable to separate themselves from these entertainment providing platforms, even in social gatherings. So, instead of socialising with people, they are glued to their handy devices, like mobile phones.

Impact of OTT on body modification choices

There are various reasons for the viewership of OTT platforms. An interesting storyline and the dressing sense of characters were found to be the most likeable parts of the content available on these platforms (81.80% and 27.55% of the respondents, respectively). In addition, 25% of respondents watched OTT content due to the celebrities involved, and the most likeable parts of other respondents were the characters’ hair colours (6.63%), body piercings (2.72%), and body tattoos (3.23%) (Table 5). We found a positive correlation between gender and the inspiration from OTT content while deciding their next look ($r =$

0.096) (Table 6). However, the association was not statistically significant, suggesting that both males as well as females can opt for body modification choices. The factors which may govern such choices include beautification, peer pressure, fitting in social groups, to appear trendy, or even cultural obligations. Inspiration from OTT content while deciding their next look (hair colour/body tattoos/body piercings) was scored on a 4-point Likert type scale. The mean of the sample was 2.91 ($SD = 0.70$). Only 5.78% of subjects responded that OTT platforms did not inspire them to make body modification choices, and the rest (94.22%) were either positive, neutral, or unaware.

A positive correlation was found between the time spent on OTT platforms and the inspiration taken by the respondents from OTT platforms while deciding their next look ($r = 0.094$, Table 7). However, no significant association was found between these two variables (as the p value was 0.22).

Table 6: Correlation between gender and inspiration from OTT content while deciding their next look

Gender	No idea	No never	Yes sometimes	Yes always	Grand Total
Male	17	8	64	11	100
Female	51	26	330	76	483
Others	0	0	1	0	1
Prefer not to say	0	0	3	1	4
Number (n)	68	34	398	88	588
Percentage (%)	11.56	5.78	67.69	14.97	100

The results, while insignificant ($p > .05$), were still quite interesting because even though people are being influenced, still they do not opt for body modification choices as they are now more aware of the risks associated with body modification choices. Also, in our study, we found that 75.2% of the people who watched

OTT content for at least 2-3 hours were not completely sure that the viewers took inspiration from OTT content while deciding on their next look (hair colour/ body tattoos/ body piercings) (Table 6). Other social media platforms may play an instrumental role in deciding their next look.

Table 7: Number of respondents watching OTT content for different time durations who think that people get inspired from OTT content while deciding their next look

Time spent on OTT content	No idea	No, never	Yes, sometimes	Yes, always	Grand Total
0-1hr	12	24	122	19	177
1-2hr	15	29	157	41	242
2-3 hr	5	9	85	14	113
>3 hr	2	6	34	14	56
Number (n)	68	34	398	88	588
Percentage (%)	11.56	5.78	67.69	14.96	100

Prevalence of hair colouring among users and associated impact of OTT platforms

Hair colouring is usually done to cover grey hair strands, but now colouring the hair is a popular fashion trend as people want themselves to appear good looking so as to highlight their looks/presence in society. 22.44% of OTT users have coloured hair, while 5.27% have not done any

colouring and 72.28% do not prefer hair colouring at all. 59.2% believed that the prevalence of hair colouring among people was due to beautification and aesthetic appeal, followed by 30.4% for grey hair coverage. Inspiration from OTT platforms and peer pressure also play an instrumental role in hair colouring according to 24% and 17.90% of respondents respectively (Table 8).

Table 8: Prevalence of hair colouring among users and associated impact of OTT platforms

Question	Parameter	Number (n)	Percentage (%)
Have you ever tried or plan to try any of these hair colour looks? /क्या आपने कभी इनमें से किसी भी हेयर कलर लुक को आजमाने की कोशिश की है या करने की योजना है?	Various shades of hair colour (Red/Wine/Burgundy/Blue/Green/Brown/any other)	132	22.45
	I do not prefer hair colouring	425	72.28
	No colour	31	5.27
	Total	588	100
Why do you think Hair Colouring is prevalent in our society?/ आपको क्यों लगता है कि हमारे समाज में बालों को रंगना प्रचलित है? (Respondents were able to select more than one option)	Inspiration from OTT Platform	141	24
	Aesthetic Appeal and Beautification	348	59.2
	Peer Pressure	105	17.9
	Grey Hair Coverage	179	30.4
	No Idea	123	20.9
	Other reasons	37	6.3
	Never tried hair colouring, so unaware	19	3.2
Do you know that hair dyes and bleaches contain harsh ingredients and active chemicals which may have some side effects?/क्या आप जानते हैं कि हेयर डाई और ब्लीच में कठोर तत्व और सक्रिय रसायन होते हैं जिनके कुछ दुष्प्रभाव हो सकते हैं?	Yes	527	89.62
	No	20	3.4
	Maybe	41	6.97
	Total	588	100
After getting your hair coloured, have you ever faced any of these symptoms mentioned below: (Select all that apply)/अपने बालों को रंगने के बाद, क्या आपने कभी नीचे बताए गए इन लक्षणों में से किसी का सामना किया है: (Respondents were able to select more than one option)	Rough Hair/ Split Ends	67	11.4
	Hair Fall/ Hair Breakage	63	10.7
	Dandruff/ Scalp irritation	34	5.8
	Premature greying of Hair	36	6.1
	Had side effects due to some previous ailment	4	0.7
	Hospitalization was needed	2	0.3
	No side effects experienced	29	4.9
	Never tried Hair Colouring	478	81.29
Do you feel that coloured hair need special products and the salon services are quite expensive due to the ongoing fashion trend?/क्या आपको ऐसा लगता है कि रंगीन बालों को विशेष उत्पादों की आवश्यकता है और चल रहे फैशन के कारण सैलून सेवाएं काफी महंगी हैं?	Products are Expensive	26	4.42
	Services are Expensive	31	5.27
	Both of them are Expensive	149	25.34
	Both of them are Reasonable	10	1.70
	Do not know	372	63.26
Total	588	100	
Do you get your hair coloured even after getting side effects from the hair bleach/ hair colour?/क्या आप हेयर ब्लीच/हेयर कलर	Yes, Immediately	5	0.85
	Yes, After some time	29	4.93
	Yes, from a different brand/salon	14	2.38

से साइड इफेक्ट होने के बाद भी अपने बालों को कलर करवाते हैं?	No, Never after the side effects	30	5.10
	No side effects experienced	32	5.44
	Never tried Hair colouring	478	81.29
	Total	588	100

A statistically significant association was found between the reasons for hair colouring and the people who did hair colouring ($p = 0.0003$, Table 9) as well as between the gender and knowledge about health risks associated with hair colouring ($p = 0.018$, Table 10). These figures suggest the growing awareness related to the harmful effects of hair colours despite the influence of OTT content and the females (97.5%) tend to be more aware about the ill effects of hair colours. The majority of subjects (89.62%) were aware of the negative effects of active chemical ingredients found in hair colouring products. As per the captured data, out of the people who

still decided to go ahead with hair colouring, 11.4% of people complained of hair roughness and split ends. While 10.7 % of people accepted that hair colouring causes hair fall or breakage, other incurred disadvantages included dandruff, scalp irritation, premature greying, as well as severe side effects (hospitalization and alleviation of previous ailments). Despite experiencing side effects, only 5.10% never went for hair colouring again from a different brand or salon. Only 1.7% of respondents felt that both the products and services for hair colouring were reasonable (Table 8).

Table 9: Association between the reason for doing hair colouring and the persons who did hair colouring (respondents who opted 'others' and 'do not know' were excluded from analysis)

Persons who did hair colouring	Inspiration from OTT	Beautification	Peer Pressure	Grey hair coverage	p value*
Student	27	113	15	14	0.0003
Government Service	1	3	1	3	
Private Job	2	9	1	11	
Business	0	4	1	2	
Homemaker; House Wife	1	4	0	5	
Unemployed	1	0	0	0	
Retired	0	1	0	1	
Number (n)	32	134	18	36	
Percentage (%)	14.55	60.91	8.18	16.36	

*chi squared test

Table 10: Answers related to assess knowledge about health risk related with hair colouring with respect to gender

Gender	Knowledge about health risk associated with hair colouring			p value*
	Yes	Sometimes	No	
Male	90	3	7	0.01854
Female	433	38	12	
Others	1	0	0	
Prefer not to say	3	0	1	
Number (n)	527	41	20	
Percentage (%)	89.63	6.97	3.40	

*chi squared test

In addition to the fear factor, education plays an important role in making a choice for hair colouring,

considering the side effects involved in this process. A positive correlation was found between people from

different academic fields, including science, commerce, and humanities, and their knowledge about the potential side effects due to the presence of harsh ingredients and active chemicals in hair dyes and bleaches ($r = 0.02$). In fact, we found that 90.3% of people from scientific backgrounds were more aware of the harmful effects of

hair colouring (Figure 1) as compared to respondents from other educational streams. The role of science education and growing awareness about the side effects of hair colouring could be a major reason for non-preference of hair colouring.

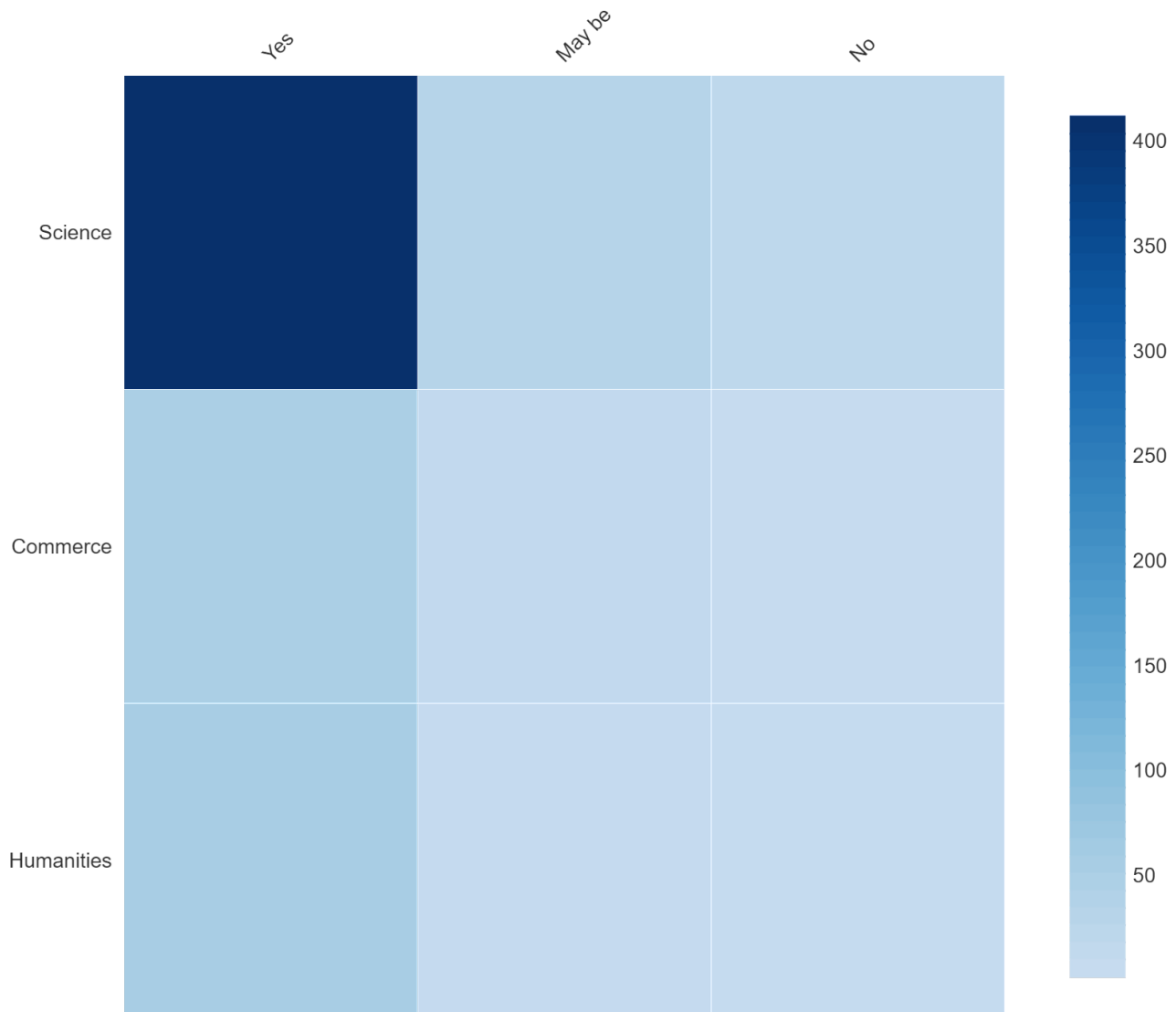


Figure 1: Heat map depicting proportion of respondents who responded that hair dyes and bleaches contain harsh ingredients and active chemicals which may have some side effects

Prevalence of body tattooing among OTT users and awareness of associated side effects

Body tattooing is another common body modification among youth and is getting popular. 23.30% of subjects from the present study had body tattoos on one or other body parts (Table 11). The major factors for the prevalence of body tattoos included the desire to look

trendy and fit in social groups (38.6%), just for experience (38.9%), inspiration from OTT platforms (31.1%), peer pressure (17.3%), and cultural boundations (6.8%). 75% ($n=441$) of respondents felt that tattoos may embed harmful chemicals and may cause skin abnormalities. Only few subjects (3.4%) did not face any side effects of body tattooing but a few of them did experience side effects after getting a body tattoo.

Table 11: Prevalence of Body tattooing among OTT users and awareness about associated side effects

Question	Parameter	Number (n)	Percentage (%)
Have you ever tried or plan to try any Tattoo looks on the following body parts? (Select all that apply) / क्या आपने कभी निम्नलिखित शरीर के अंगों पर कोई टैटू लुक आजमाने की कोशिश की है या करने की योजना बना रहे हैं? (लागू होने वाले सभी का चयन करें) <i>(Respondents were able to select more than one option)</i>	Wrist, neck, back, waist, arm, chest or any other part	137	23.30
	Do not prefer Tattoos	451	76.7
	Total	588	100
Why do you think Tattoos are prevalent these days?/ आपको क्या लगता है कि आजकल टैटू का प्रचलन क्यों है? <i>(Respondents were able to select more than one option)</i>	Inspiration from OTT platforms	183	31.1
	Peer pressure	102	17.3
	To fit in social groups and appear trendy	227	38.6
	Cultural Boundations	40	6.8
	Just for experience	229	38.9
	Do not know	187	31.8
Do you know that tattoos may embed harmful chemicals into your system and cause skin abnormalities? / क्या आप जानते हैं कि टैटू आपके सिस्टम में हानिकारक रसायनों को एम्बेड कर सकते हैं और त्वचा की असामान्यताओं का कारण बन सकते हैं?	Yes	441	75
	No	52	8.8
	Maybe	95	16.2
	Total	588	100
After getting tattoos, have you ever faced any of these side effects mentioned below: (Select all that apply) / टैटू बनवाने के बाद, क्या आपने कभी नीचे बताए गए इन दुष्प्रभावों में से किसी का सामना किया है: (लागू होने वाले सभी का चयन करें) <i>(Respondents were able to select more than one option)</i>	Itching; Inflammation	14	2.4
	Swelling/ Redness	12	2
	Blood clotting	6	1
	Scarring	6	1
	Skin Cancer	7	1.2
	Had side effects due to some previous ailment	2	0.3
	Medical Assistance was needed	1	0.2
	Hospitalization was needed	2	0.3
	No side effects experienced	20	3.4
	Never tried tattoos	501	85.20
Do you feel that getting a tattoo and maintaining a tattoo is expensive?/ क्या आपको ऐसा लगता है कि टैटू बनवाना और टैटू की देखभाल करना महंगा है?	Getting Tattoos is expensive	25	4.25
	Tattoo maintenance is expensive	8	1.36
	Both of them are expensive	27	4.59
	Both of them are reasonable	27	4.59
	Never tried tattoos	501	85.20
	Total	588	100

Prevalence of body piercing among OTT users and impact of OTT

Body piercings have been part of the cultural roots of India for many centuries, with old artefacts and monuments featuring statues of women and men adorned with nasal and ear piercings. The point of interest that this survey aimed to capture was the growing popularity of body piercings in non-conventional body parts like eyebrows, septum, tongue, lips, and belly button. From the present survey it was found that 48.47 % responses were received

where subjects did body piercing for body piercing in conventional body parts like ear lobes (one pair, 39.6%) and one nostril (12.8%) (Table 12). On studying the underlying causes that motivated the subjects to opt for body piercings, it was revealed that 35.9% of the subjects felt that cultural practices were one of the major reasons for Indians. The other reasons for getting pierced included social acceptance (27%), inspiration from OTT platforms (23.1 %), just for experience (29.4%), and peer pressure (10.9%) (Table 12).

Table 12: Prevalence of body piercing among OTT users and impact of OTT

Question	Parameter	Number (n)	Percentage (%)
Have you ever tried or plan to try any of these Body Piercing looks on the following body parts? (Select all that apply) / क्या आपने कभी निम्नलिखित शरीर के अंगों पर इनमें से किसी भी बॉडी पियर्सिंग लुक को आजमाने की कोशिश की है या करने की योजना बना रहे हैं? (लागू होने वाले सभी का चयन करें) (Respondents were able to select more than one option)	Ear (One pair)	233	39.6
	Ear (More than One pair)	91	15.5
	Nose (On Nostrils)	75	12.8
	Nose (On Septum)	9	1.5
	Eyebrow	11	1.9
	Navel/ Belly button	6	1.0
	Tongue	3	0.5
	Lips	6	1
	Nipple	0	0
	Never tried Body Piercings	303	51.53
Why do you think body piercings are prevalent in our society? / आपके अनुसार हमारे समाज में शरीर छिदवाने का प्रचलन क्यों है? (Respondents were able to select more than one option)	Inspiration from OTT platforms	136	23.1
	Peer pressure	64	10.9
	To fit in social groups and appear trendy	159	27
	Cultural Boundations	211	35.9
	Just for experience	173	29.4
	Do not know	188	32
After getting body piercings, have you ever faced any of these side effects mentioned below: (Select all that apply) / शरीर में छेद करने के बाद, क्या आपने कभी नीचे बताए गए इन दुष्प्रभावों में से किसी का सामना किया है: (लागू होने वाले सभी का चयन करें) (Respondents were able to select more than one option)	Itching/ Inflammation	64	10.9
	Swelling/ Redness	93	15.8
	Blood Clotting	12	2
	Scarring	8	1.4
	Skin Cancer	3	0.5
	Had side effects due to some previous ailment	1	0.2
	Medical assistance was needed	7	1.2
	Hospitalization was needed	3	0.5

Question	Parameter	Number (n)	Percentage (%)
	No side effects experienced	196	33.3
	Never tried Body Piercings	303	51.53
Do you feel getting body piercings and their maintenance is expensive? / क्या आपको ऐसा लगता है कि शरीर में छेद करना और उनका रखरखाव करना महंगा है?	Getting the body piercing is expensive	11	1.88
	Maintenance of body piercings is expensive	13	2.21
	Both of them are expensive	24	4.08
	Both of them are reasonable	237	40.30
	Never tried body piercing	303	51.53
	Total	588	100
Which material is the best for making body piercings keeping in mind the comfort, cost and durability of the pierced ornament? / छेदा हुआ आभूषण के आराम, लागत और स्थायित्व को ध्यान में रखते हुए शरीर भेदी बनाने के लिए कौन सी सामग्री सबसे अच्छी है? (Respondents were able to select more than one option) This data can be deleted	Platinum	59	10
	Gold	286	48.6
	Silver	154	26.2
	Artificial Metal Alloys	36	6.1
	Plastic	9	1.5
	Others	7	1.2
	Do not know	240	40.8
How did your technician discard the needle that he/ she used for tattoo making; body piercing? / आपके तकनीशियन ने टैटू बनाने; शरीर भेदी के लिए इस्तेमाल की जाने वाली सुई को कैसे त्याग दिया? (Respondents were able to select more than one option)	Broke the Needle	50	8.50
	Kept the Needle	5	0.85
	Washed and Reused	8	1.36
	Needle was not used in the process	61	10.37
	Did not notice	100	17
	Never tried Tattoos/ Body piercings	303	51.53
	Total	588	100

The trend of non-conventional body piercings is growing not only in India but worldwide as well, but many people fail to ensure the safety and security standards while getting these modifications. 17% of the respondents did not notice whether their technician discarded the used needle or not, while 0.85% of the respondents observed that their technicians kept the used needle for further use and 1.36% noticed their technicians washing the needles for reuse. Only 8.5% of people responded that their technicians followed the safety standards for the prevention of transmissible diseases and broke the used needle right after use. 15.8% of the respondents responded that they experienced some side effects like swelling, pus, and redness after getting body piercings, while 10.9% of

the respondents experienced itching and inflammation. The percentage distribution of the side effects experienced in extreme cases equalled 5.6%, which was almost thrice the total percentage where the technicians reused the needles (1.9%). This data also helped us predict the extent to which technicians were reusing needles and risking the wellness of their respective consumers.

Discussion

OTT platforms have witnessed a surge in usage and demand by consumers in the past few years [8] and these media services are not restricted to the urban and suburban regions. With companies bringing down their subscription charges, OTT platforms like Amazon Prime, Hotstar,

YouTube Red, and even Netflix are being used by people in rural areas as well. In this study, we assessed the role and impact of OTT platforms on the socio-psychological aspects of their direct users and how their mental states are affected by watching different types of entertainment content on these platforms through an online survey. The aim of the study was to determine the importance of OTT platforms in the decision making of respondents for their body modification choices, including body tattooing, piercing, hair colouring and mental health. The current study suggests an increased anxiety or restlessness among OTT users who spend a variable number of hours in a day watching the content on OTT platforms due to technical or personal reasons. A significant association was found between the time spent on OTT platforms in a day and the degree of anxiety experienced when the respondents could not view the content (Table 4).

As far as the spread of body modification choices like hair colouring is concerned, the results showed an increased proportion of respondents, especially young Indian female students, who opted for hair colouring for beautification or after getting inspired or influenced by OTT content. A statistically significant association was noted between the reason for hair colouring and the people who did hair colouring (Table 10). However, many respondents (72.28%) did not prefer hair colouring, which suggested that people are becoming more aware of the ill effects of hair colouring chemicals. Hair dyes can be oxidative (permanent) or direct (temporary or semipermanent). The hair colouring products or dyes consist of two bottles, one containing the intermediate and the other as an oxidising agent or oxidiser like hydrogen peroxide. These intermediates (like paraphenylene-diamine (PPD), resorcinol, and aminophenol) are uncoloured compounds but, when mixed with oxidizing products, produce coloured compounds [9].

Regarding body tattooing and piercing, there was an increased awareness and knowledge about the risks associated with these practices. In fact, we found that people from scientific backgrounds tend to be more vigilant about the harmful effects of body tattoos and piercings as well as hair colouring and hence do not prefer such choices. We found that very few people are carrying out non-conventional body piercings and body tattooing as compare to other parts of the world [10]. Body piercing is also a permanent form of body modification that involves the use of externally set jewellery pieces and types of equipment that make the piercing possible. Human bodies are programmed to have a robust immunity system, but sometimes people experience a variety of side effects and permanent damage when foreign particles come into contact with or inside their bodies. On analysing the polls, it was determined that 40.3% of the respondents believed that body piercing and its maintenance was reasonable. Many considered it reasonable because it was more of a one-time investment. Despite this low cost of maintenance, the safety standards and awareness around safe piercing practices are still uncertain. While getting

pierced is a one-time affair, adorning the piercing with ornaments is a long- term commitment. The ornaments available in the market are designed around three parameters: comfort, durability, and cost. Keeping a balance between these three parameters is what consumers and technicians look out for. About 48.6% of the subjects believe that gold is the best material for making the piercing ornament due to its inert nature and the durability it offers (long- term resistance to wear and tear). Despite the fact that the cost of gold is high, people believe that the option will prove to be reasonable in the long run. The return value and asset addition of gold make it a popular choice amongst buyers. The liking for silver (26.2%) and platinum (10%) can also be justified on the same parameters. Only a meagre total of 8.8% of subjects believe that artificial metal alloys (6.1%), plastic (1.5%), and other materials (1.2%) are suitable to be used for making ornaments (Table 12).

Surprisingly, we discovered that approximately 75% of respondents were aware that the tattoo could embed harmful chemicals in their bodies and cause skin abnormalities. Also, about 16% of the respondents were in a dilemma about whether the tattoo has such effects or not. So, with growing awareness about the complications involved with body tattooing, most of the respondents (85.2%) had never tried body tattoos. Another reason for not getting a body tattoo may be that some people feel getting the tattoo is expensive, or that maintaining a tattoo is expensive, and some feel both of these factors are expensive.

Conclusion

The current study is a step towards better understanding the growing impact of OTT on the mental health status of its viewers and the health concerns associated with body modification choices like hair colouring, body tattooing, and piercing. Among the respondents of the present survey, the prevalence of OTT users was 83.6% (n = 588), while the prevalence or inclination for hair colouring, body tattooing, and body piercing was 22.45%, 23.30%, and 48.47%, respectively, among OTT users. It was found that the OTT content was influencing some people to opt for such choices, as observed in the present survey wherein 24%, 31.1% and 23.1% of respondents were opting for hair colouring, body tattooing, and body piercing respectively. In addition to the influence of OTT for opting such choices, beautification, cultural practices, and the desire to fit into social groups were also found to be responsible factors. Besides OTT, the younger generation also follows other social media platforms, which may also influence their body modification choices as well. Awareness about the use of harsh chemicals used in hair colouring products and their associated side effects may be a major reason for low prevalence of hair colouring (22.45%). Only 8.8% respondents were not aware that tattoos may embed harmful chemicals in their system and cause abnormalities. In the case of body piercing, 17% of the respondents were unaware about the procedure used to dispose of the needles after use. With

increased awareness about the risks involved with hair colouring, tattooing and piercing like inflammatory and allergic responses or infectious diseases, as well as the financial burden associated with getting and maintaining such choices, there is a decreased interest among respondents to opt for these practices.

Acknowledgement

We are highly thankful to the Principal, Maitreyi College, University of Delhi for constant support and encouragement. We are also thankful to all our respondents.

Funding

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Conflicts of interest

There are no conflicts of interest among authors. The authors alone are responsible for the content and writing of the paper.

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