

Original Research Article

Risk perceptions and behaviours among youth using dating applications in Mumbai

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ABSTRACT

Background: One of the primary goals of young adulthood is to establish a committed romantic relationship. During the last decade, Internet has become an important platform to initiate contact with potential romantic/sexual partners. The study aims to estimate usage of dating apps among young adults and understand the implications of their use.

Methods: A cross-sectional study was done amongst 18-25 years college students from a metropolitan city of India. Minimum sample size required for the study was 1012. Ethical approval was obtained from IEC and data was collected via a Google form amongst students from colleges in particular area of city. Data was entered in Excel and analyzed through SPSS software.

Results: Of the 1641 participants of the study, 208(12.7%) were using dating applications, more in males (14.9%) in comparison to females (11.2%). Most common reason for use was finding love/partner (30.3%), casual sex (28.4%) and exploring/experimenting (26.9%). Association between use of dating applications was statistically significant with gender, duration of stay in city, relationship status, sexual orientation and habits. Untoward incidents and regret due to use of app was observed in 24(11.5%) of the users. Majority of the participants affirmed that dating apps do not provide any information about STIs and predatory profiles.

Conclusions: The risk factors associated with dating apps were male gender, residing in city since more than a year, habits like smoking, alcohol etc, sexual orientation and relationship status. Untoward incidents due to use of apps need to be managed by legal safeguards and regulation.

Keywords: Dating applications, Habits, Sexual orientation, Youth

INTRODUCTION

Establishing a committed romantic relationship is one of the primary goals of young adulthood.¹ The process of building and maintaining a committed romantic relationship is characterized by trial-and-error and can be preceded by an explorative phase that involves casual sex adventures.^{2,3} During the last decade, Internet has become an important platform to initiate contact with potential romantic or sexual partners.⁴ With the rise of smartphone use, dating websites have made way for dating

applications (apps) specially designed for the smartphone, that is, mobile dating. The Statista Market Forecast estimated that by the end of 2019, there were more than 200 million active users of dating apps worldwide.⁵ It has been noted that more than 10 million people use Tinder daily, which has been downloaded more than a hundred million times worldwide.^{6,7} In addition, studies conducted in different geographical and cultural contexts have shown that around 40% of single adults are looking for an online partner.⁸

Initially in India, dating websites had little presence. Instead, it was chat rooms (Yahoo, MSN) and messaging services on social networking platforms (Orkut, Hi5, Facebook) that were the places where intimate connections (not explicitly aimed at marriage) were being imagined and forged.⁹ This was particularly valuable for those who had trouble expressing face to face about their sexual orientation and/or finding a partner.¹⁰

Online dating apps such as Tinder are changing the way Indians date. Users capture the same social cues from app profiles, as it does when you meet someone in the offline world. It has led to newer ways of communication and behaviors amongst the youth of urban India. The Indian youth in their twenties are shifting their usage pattern from 'Dating' to more of a 'Socializing' purpose and creating strong ties.¹¹ There is a stereotype that dating apps are used only, or above all, to look for casual sex. In fact, these applications have been accused of generating a hookup culture, associated with superficiality and sexual frivolity. However, in the last five years, a large body of literature has been generated on the reasons why people use dating apps, and the conclusion is unanimous: apps serve multiple purposes, among which casual sex is only one.^{12,13} It has been observed that up to 70% of the app users participating in a study indicated that their goal when using it was not sex-seeking.¹⁴

A Brigham Young University nursing team examined the medical exam records of Utah sexual assault victims from 2017 to 2020 which revealed 14% of the 1,968 rapes perpetrated by acquaintances, took place during an initial meeting set up using a dating app. In certain instances, the attacks were more violent and victims with mental problems and other vulnerabilities were specifically targeted.¹⁵

According to a statement by Tinder, "Thirty-eight percent of girls and women report being bullied online, compared to 26 percent men and boys. Twenty-six percent of women aged 18-24 reported being stalked and 25 percent reported being a target of online harassment."¹⁶ As per the available literature, there has been a tremendous increase in the use of dating apps amongst the youth of the country. This has been accompanied by increase in sexually transmitted infections among the youth, along with increased crimes in association with use of dating apps. The current study is an attempt to estimate the usage of dating apps among young adults, the target users of these apps along with reasons for use and its social, physical and mental implications on their health. Notably, very few studies have been done in India in this context making this study unique and relevant.

METHODS

Study design

An epidemiological cross-sectional study was conducted between March 2023 and October 2023 across selected

higher education colleges located in suburban Mumbai, India.

Study population

The study population comprised male and female undergraduate and postgraduate students aged 18 to 25 years.

Inclusion criteria

Participants aged between 18-25 years, and studying in one of the selected colleges were included in the study.

Exclusion criteria

Participants diagnosed/on treatment for any mental disorders were excluded from the trial.

Sample size

Prevalence of use of dating apps among persons between 18-25 years is 35% according to a nationwide survey.¹⁷ According to the formula: $n = 4pq/L^2$, where n is sample size, p is prevalence rate, q - 100-p and L - absolute error taken as 3%. Thus, the minimum sample size required for the study is 1012.

Sampling methods

A study was conducted among the youth of a metropolitan city to estimate the usage of dating applications. Ethical approval from the Institutional Ethics Committee was obtained. (HBTMC/IEC/09-23/O/RP/ 085/28022023/2023). The study was conducted amongst participants aged between 18-25 years studying in randomly selected colleges in a suburban area of Mumbai. Required permissions from College Principals/Deans were obtained. Participants were interviewed using a Google form-based questionnaire. The questionnaire was validated by independent subject experts. Following Helsinki Declaration, Informed Consent was obtained from all participants at the beginning of the Google form. Questionnaire included socio-demographic data, questions regarding use, reasons and implications of use of dating apps by the students. After the survey, health education session regarding pros and cons of dating applications along with safe sex behavior was conducted for all participants of the study.

Statistical analysis

Data was entered in Microsoft EXCEL and analyzed using SPSS VERSION 22.0. The qualitative data is represented in the form of frequency and percentage and quantitative data is represented in the form of mean, standard deviation. The comparison between the two groups for various factors was done using Chi square test.

RESULTS

A cross-sectional study was done to estimate the use of dating applications among the youth of a metropolitan

city. A total of 1641 respondents participated in the study. Majority of the participants were females, belonging to the age group between 18-21 years (Table 1).

Table 1: Socio-demographic profile of the study participants (n=1641).

Variable	Frequency (N)	Percentage (%)
Gender		
Male	651	39.7
Female	984	60
Non-binary	01	0.06
Prefer not to say	05	0.3
Age groups		
18-21 years	1527	93.1
22-25 years	114	6.9
Religions		
Hinduism	1324	80.7
Jainism	129	7.9
Islam	112	6.8
Buddhism	23	1.4
Christianity	18	1.1
Sikhism	16	0.9
Zoroastrianism	07	0.4
Judaism	01	0.1
Prefer not to say	11	0.7
Studying in		
Arts	340	20.8
Commerce	482	29.3
Science	263	16
Pharmacy	40	2.5
MBBS	516	31.4
Residing in Mumbai		
<1 year	549	33.5
1 to 3 years	164	10
> 3 years	928	56.5
Relationship status		
Not dating	1232	75.1
Casual encounters	132	8
Dating	277	16.9
Sexual orientation		
Heterosexual	993	60.5
Homosexual	464	28.3
Bisexual	90	05.5
Asexual	88	05.4
Prefer not to say	06	0.3
Habits		
Smoking	68	4.1
Alcohol	29	1.7
Both	52	3.2
Hookah	45	2.7
Vape	39	2.4
Others	17	1.1
None	1391	84.8
Use of dating applications		
Yes	208	12.7
No	1433	87.3

Continued.

Variable	Frequency (N)	Percentage (%)
Other social media applications for dating		
Yes	626	38.1
No	1015	61.9

Dating applications were used by 208 (12.7%) participants in the current study, amongst them the most commonly used apps were bumble (43.9%) followed by tinder (22.3%), hinge (13.8%), grindr (11.5%) and others viz. okcupid, aisle, happn (8.5%). Among the subjects, 111 (11.2%) of the females and 97 (14.9%) of the males were using dating apps. Moreover, 626 (38.1%) of the respondents affirmed using other social media applications for dating. Multiple apps were used for the purpose of dating by most users (62.7%). The most commonly used applications were Instagram (84.5%), Snapchat (35.7%), Facebook (7%) and Twitter (4.9%). Gender-wise more males (41.6%) used other apps for dating in comparison to females (35.5%). Among the male study participants, 501 (76.9%) were not in a relationship, 93 (14.3%) were dating and 57 (8.8%) were involved in a casual relationship. Similarly, in the female population, 727 (73.9%) were single, 183 (18.6%) were dating and 54 (7.5%) were involved in a casual relationship. Among the female study participants, 246 (25%) were homosexuals and 63 (6.4%) were bisexuals whereas the numbers in male respondents were 218 (33.5%) and 27 (4.1%) respectively. Habits like smoking, alcohol etc. were noted in 79 (12.1%) of male population as compared to 93 (9.5%) of the female participants (Table 1).

Among the study population using dating apps, major reasons for use were finding love/partner (63, 30.2%),

casual sex (59, 28.7%) and exploring/experimenting (56, 26.9%) (Figure 1).

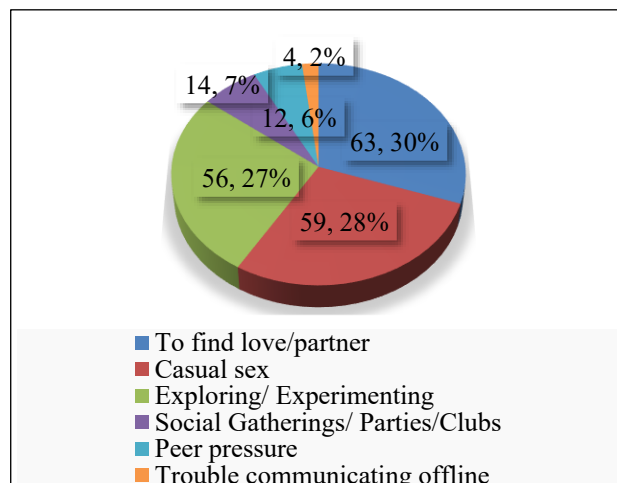


Figure 1: Reasons for using dating applications (n=208).

The association between sexual encounter was statistically significant with habits (p value 0.001) relationship status (p value <0.00001) and untoward incidents due to use (p value 0.0004). Also, the association between habits was statistically significant with untoward incident (p value 0.034) [non-tabulated data] (Table 2).

Table 2: Association between use of dating apps and socio-demographic variables (n=1641).

Variables	Dating App Yes, N (%)	Dating App No, N (%)	Chi-square, degree of freedom, p value
Gender (n=1635)			
Male	97 (14.9)	554 (85.1)	4.623, 1, 0.031*
Female	111(11.2)	873 (88.8)	
§Religion (n=1630)			
Hindu	192 (13.1)	1277 (86.9)	1.928, 2, 0.381
Muslim	11 (9.8)	101 (90.2)	
Others	4 (8.2)	45 (91.8)	
§Studying in			
MBBS	77 (14.9)	439 (85.1)	3.434, 1, 0.063
Others	131 (11.6)	994 (88.4)	
Staying in Mumbai			
<1 year	62 (11.3)	487 (88.7)	6.760, 2, 0.034*
1 -3 years	31 (18.9)	133 (81.1)	
>3 years	115 (12.4)	813 (87.6)	
Relationship status			
Dating	52 (18.8)	225 (81.2)	78.954, 2, 0.000*
Casual relationship	45 (34.1)	87 (65.9)	
Not dating	111 (9)	1121 (91)	

Continued.

Variables	Dating App Yes, N (%)	Dating App No, N (%)	Chi-square, degree of freedom, p value
Sexual orientation (n=1635)			
Heterosexual	129 (13)	864 (87)	15.217, 3, 0.001*
Homosexual	51 (11)	413 (89)	
Bisexual	22 (24.4)	68 (75.6)	
Asexual	6 (6.8)	82 (93.2)	
Habits			
Yes	171 (68.4)	79 (31.6)	41,665, 1, <0.00001*
No	37 (2.7)	1354 (97.3)	

^SData clubbed/pooled for analysis purpose; *P value significant at <0.05

Table 3: Implications of use of dating apps among app users (n=208).

Variable	Male, N (%)	Female, N (%)	Total, N (%)
Met someone from the app			
Yes	44 (45.4)	58 (52.3)	102 (49)
No	53 (54.6)	53 (47.7)	106 (51)
Had sexual encounter			
Yes	34 (35.1)	38 (34.2)	72 (34.6)
No	63 (64.9)	73 (65.8)	136 (65.4)
Used protection during sex (n=72)			
Yes	27 (79.4)	34 (89.5)	61(84.7)
No	07 (20.6)	04 (10.5)	11 (15.3)
Meaningful relations with someone			
Yes	20 (20.6)	23 (20.7)	43 (20.7)
No	77 (79.4)	68 (61.3)	165 (79.3)
Information about sexually transmitted infection from app			
Yes	24 (24.7)	18 (16.2)	42 (20.2)
No	73 (75.3)	93 (83.8)	166 (79.8)
Any untoward incident due to use			
Yes	12 (12.4)	12 (10.8)	24 (11.5)
No	85 (87.6)	99 (89.2)	184 (88.5)
Duration of use of app			
< 6 months	54 (55.6)	66 (59.5)	120 (57.7)
6 months to 1 year	16 (16.5)	11 (09.9)	27 (13)
1 to 3 years	15 (15.5)	19 (17.1)	34 (16.3)
> 3 years	12 (12.4)	15 (13.5)	27 (13)
Did you require counselling/treatment			
Yes	10 (10.3)	08 (07.2)	18 (8.7)
No	87 (89.7)	103 (92.8)	190 (91.3)
Do you regret using the app			
Yes	09 (09.3)	15 (13.5)	24 (11.5)
No	88 (90.7)	96 (86.5)	184 (88.5)
Would you recommend to someone			
Yes	56 (57.8)	56 (50.5)	112 (53.9)
No	41 (42.2)	55 (49.5)	96 (46.1)
Do apps give information about predatory profile			
Yes	27 (27.8)	29 (26.1)	56 (26.9)
No	70 (72.2)	82 (73.9)	152 (73.1)

In the study population using dating apps, 102 (49%) met someone from the app and 72 (34.6%) had sexual encounter with someone they met through the application. Only 43 (20.7%) formed a meaningful relationship with

someone they met through the application (Table 3). Among the respondents using dating apps, 24 (11.5%) met with an untoward incident and was seen more in males 12 (12.4%) as compared to females 12 (10.8%).

The most common untoward incident reported was blackmail and identity leak 10 (42%) followed by Sexually Transmitted Infections 5 (21%), sexual violence 4 (17%), financial frauds 3 (12%) and physical violence 2 (8%). Also, 24 (11.5%) regretted using the app with the proportion being higher in females 15 (13.5%) compared to males 9 (9.3%). Moreover, more males 56 (57.8%) were comfortable in recommending the app to others as compared to females 56 (50.5%) (Table 3).

DISCUSSION

The present study was conducted to estimate the use of dating apps by youth from a Metropolitan city in India along with understanding the reasons and implications of their use. In the current study, 208 (12.7%) participants were using dating applications. The usage in this study is less as compared to study by Sawyer et al (39.5%) and most of the available literature.^{17,18} There may be under-reporting of use of apps by the students. The reason for under reporting may be stigma associated with the use of dating apps in Indian setting as participants may not be comfortable about sharing their personal life. Also in the current study, it was observed a substantial number of subjects viz. 626 (38.1%) were using other multiple social media applications for the purpose of dating. Among the study subjects using dating apps, usage was more in males (14.9%) as compared to females (11.2%). Similarly, study by Abramova et al observed higher use amongst the male gender.¹⁹ Another study by Timmermans et al noted that men use apps more often and more intensely. On the other hand, women use these applications more selectively and effectively. Thereby more matches are accumulated and much faster by women than men, allowing them variety of choices and greater sense of control.¹² The association between male gender and app use was statistically significant in our study and was in agreement with available literature.^{12,19,20}

Out of the subjects using dating apps, majority 115 (55.3%) were residing in city since more than 3 years. The finding is in accordance with study by Licoppe which observed that majority of users of dating applications are from urban areas.²¹ The reason for this could be the culture and trends in cities along with peer pressure from friends for using the app. Majority of the available literature points to increased use of apps among cities, but paucity of research in semi-urban and rural areas may be a potential bias for such observations.

The association between use of dating app was statistically significant with relationship status as majority of the app users-156 (75%) were single/ looking for casual sex at the time of using apps. Similar observation has been noted by Castro et al. where being single was the most important predictor for use of dating apps.²⁰ In the current study, 52 (25%) subjects who were already dating were also using the app. Recent literature points to increase in the use of apps in people already in a

relationship, the reason for which may include boredom, trust issues and thrill-seeking behaviour among the subjects.¹²

Also, sexual preferences of the individual had significant association with use of dating apps. Traditionally, dating apps have been used majorly by heterosexual individuals.²² In our study, 19 (8.7%) and 32 (13%) of the total homosexual males and females were using dating apps respectively. In the respondents using dating apps, 51 (24.5%) were homosexual and 22 (10.6%) were bisexual. Similarly, observations from various new literature reveals the use of dating apps has increased significantly in sexual minority groups especially in the male gender. However, in our findings it was observed that more homosexual females were using the app. This may indicate the penetration of app in the more vulnerable groups like female homosexuals. For these groups, being able to communicate online is important as it may be difficult for expressing their sexual orientation and/or finding a partner on the offline phase.^{12,22}

In the study participants, habits like smoking, alcohol etc. were significantly associated with use of dating apps. Similar observations were made by Flesia et al in their study to find the association between smoking, alcohol consumption and use of dating apps.^{23,24} These findings suggest that high risk behavior like smoking, alcohol, drugs etc. are major determinants for the use of dating apps.

Amongst the participants using dating apps, 102 (49%) met with someone they connected through the app. The findings were consistent with the study by Strugo et al where more than 50% of the participants met their matches in real life.²⁵ Also, 72 (34.6%) subjects in the current study had sexual encounter with someone they met via the app. Similar results were noted in the studies by Timmermans et al and Strugo et al where one third and more than half of the study participants had sex with their matches respectively.^{12,25}

Most of the study subjects involved in sexual activity viz. 61 (84.7%) used condoms during sexual intercourse thereby suggesting safe sex practices in the study population. However, in most available literature, dating apps have been associated with high risk and unsafe sex practices.^{18,26} The findings suggest increase in knowledge about STIs and safe sexual behavior among students, which is a welcome change. Another reason for this could be the various awareness sessions regarding safe sex practices being organized for students annually in their respective colleges.

Among the participants using dating apps, 166 (79.8%) and 152 (73.1%) answered in the negative when asked about receiving information about STI and predatory profiles respectively from the app. Similar observations have been made in available literature warranting

increased awareness and responsibility by makers of the apps for safeguarding interests of their users.^{18,27}

In this study, 43 (20.7%) of the app users made meaningful relations with people they met on the app. In the study by Timmermans et al one fourth of the participants formed meaningful relations thereby suggesting that the apps are used for purposes more than just casual sex.¹² However, the major reasons for use of apps in the study were finding love/partner, casual sex and experimenting respectively. Similar studies on the reasons have come forward with the reasons for use being- experimentation, casual sex, socializing and romantic relations, thereby refuting the notion that apps are only used for casual sexual encounters.^{12,22}

Untoward incidents due to use of the app, along with regret was affirmed by 24 (11.5%) participants. There is a growing literature alerting about increasing amount of sexual harassment and abuse related to dating apps, especially in vulnerable groups, such as women/sexual minorities thereby indicating requirement of legal safeguards and regulations for the same.²⁸

This study has few limitations. Firstly, the research was exclusively conducted in an urban population, potentially limiting the use of findings in rural areas. Secondly, the study did not delve into determining the frequency or intensity of app usage among participants. Lastly, the research did not account for individuals aged 18-25 who were not attending college, thereby potentially excluding a portion of the young adult population from the study sample. Future studies involving major cities, towns and rural areas would provide a complete picture of the usage of apps all over the country.

CONCLUSION

The present study demonstrates that although the reported prevalence of dating app use among college-going youth in an Indian metropolitan city was relatively low, a substantial proportion of young adults used either dedicated dating applications or other social media platforms for dating purposes. Dating app use was significantly associated with male gender, being single, sexual orientation, and engagement in risk behaviours such as smoking and alcohol consumption. While many users sought romantic relationships and meaningful connections, a considerable proportion also reported offline meetings and sexual encounters, with encouraging levels of condom use during sexual activity. However, the limited availability of in-app information on sexually transmitted infections and protection from predatory profiles highlights an important gap in user safety. The occurrence of regret and untoward experiences among a subset of users further underscores the need for stronger safeguards and user education. These findings emphasize the evolving role of digital platforms in shaping interpersonal relationships among Indian youth and highlight the need for comprehensive sexual health

education, digital safety awareness, and responsible app-based interventions. Further multicentric studies including urban, semi-urban, and rural populations are warranted to better understand dating app use and its social and public health implications in the Indian context.

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REFERENCES

1. Arnett J: Sensation seeking: a new conceptualization and a new scale. *Pers Individ Dif*. 1994;16(2):289-96.
2. Stinson RD: Hooking up in young adulthood: a review of factors influencing the sexual behavior of college students. *J College Stud Psychother*. 2010;24(2):98-115.
3. Claxton SE, Van-Dulmen MH: Casual sexual relationships and experiences in emerging adulthood *Emerg Adulthood*. 2013;1(2):138-50.
4. Rosenfeld MJ, Thomas RJ: Searching for a mate: the rise of the internet as a social intermediary. *Am Sociol Rev*. 2012;77(4):523-47.
5. Statista. Dating Services: market data and analysis, 2019. Available at: <https://www.statista.com/study/40456/dating-services-report/>. Accessed 05 February 2023.
6. Duncan Z, March E: Using Tinder to start a fire: Predicting antisocial use of Tinder® with gender and the Dark Tetrad. *Personal. Individ. Differ*. 2019;145:9-14.
7. Sevi B, Aral T, Eskenazi T. Exploring the hook-up app: Low sexual disgust and high sociosexuality predict motivation to use Tinder for casual sex. *Personal. Individ. Differ*. 2018;133:17-20.
8. Gatter K, Hodkinson K. On the differences between Tinder™ versus online dating agencies: Questioning a myth. An exploratory study. *Cogent psychol*. 2016;3(1):1162414.
9. Punathambekar A, Mohan S. *Global Digital Cultures: Perspectives from South Asia*. University of Michigan Press, Michigan; 2019.
10. Goldenberg D. Disconnected connectedness: The paradox of digital dating for gay and bisexual men. *J. Gay Lesbian Ment. Health*. 2019;23(3):360-66.
11. Chakraborty D. Components affecting intention to use online dating apps in India: A study conducted on smartphone users. *Asia-Pac J Manag Res Innov*. 2019;15(3):87-96.
12. Timmermans E, Courtois C. From swiping to casual sex and/or committed relationships: Exploring the experiences of Tinder users. *Inf Soc*. 2018;34(2):59-70.
13. LFebvre LE. Swiping me off my feet: Explicating relationship initiation on Tinder. *J Soc Pers Relatsh*. 2018;35(9):1205-29.

14. Badal HJ, Stryker JE, DeLuca N, Purcell DW. Swipe right: Dating website and app use among men who have sex with men. *AIDS Behav*. 2018;22(4):1265-72.
15. Violent sexual predators use dating apps as hunting grounds, 2022. Available at: <https://theprint.in/features/study-violent-sexual-predators-use-dating-apps-as-hunting-grounds/1222214/>. Accessed 27 January 2023.
16. Times of India. In the age of rising cyberstalking, dating apps fight digital abuse, 2021. Available at: [https://timesofindia.indiatimes.com/life-style/relationships/love-sex/in-the-age-of-rising-cyberstalking-dating-apps-](https://timesofindia.indiatimes.com/life-style/relationships/love-sex/in-the-age-of-rising-cyberstalking-dating-apps-.). Accessed 27 January 2023.
17. Statista. India: mobile dating application users by age group, 2020. Available at: <https://www.statista.com/statistics/1182811/india-share-of-mobile-dating-application-users-by-age-group/>. Accessed 30 January 2023.
18. Sawyer AN, Smith ER, Benotsch EG. Dating application use and sexual risk behavior among young adults. *Sex Res Soc*. 2018;15(2):183-91.
19. Abramova O, Baumann A, Krasnova H, Buxmann P. Gender differences in online dating: What do we know so far? A systematic literature review. In 2016 49th Hawaii international conference on system sciences (HICSS). IEEE. 2016:3858-3867.
20. Castro Á, Barrada J, Ramos-Villagrasa P, Fernández-del-Río E. Profiling dating apps users: Sociodemographic and personality characteristics. *Int J Environ Res Publ Health*. 2020;17(10):3653.
21. Licoppe C. Liquidity and attachment in the mobile hookup culture. A comparative study of contrasted interactional patterns in the main uses of Grindr and Tinder. *J Cult Econ*. 2020;13(1):73-90.
22. Sumter SR, Vandenbosch L. Dating gone mobile: Demographic and personality-based correlates of using smartphone-based dating applications among emerging adults. *New Media Soc*. 2019;21(3):655-73.
23. Flesia L, Fietta V, Foresta C, Monaro M. The association between dating apps and alcohol consumption in an Italian sample of active users, former users, and non-users. *Soci Sci*. 2021;10(7):249.
24. Flesia L, Fietta V, Foresta C, Monaro M. Cigarette smoking and dating app use: Findings from a survey in a sample of adults in Italy. *Eur J Investig Health Psychol Educ*. 2021;11(2):557-69.
25. Strugo J, Muise A. Swiping for the right reasons: Approach and avoidance goals are associated with actual and perceived dating success on Tinder. *Can J Hum Sex*. 2019;28(2):93-104.
26. Edmond PH, Janet YH, Herman HM, Wendy W, Jasmine HM, Daniel YT. The association between smartphone dating applications and college students' casual sex encounters and condom use. *Sex Reprod Healthc*. 2016;9:38-41.
27. Gilla KS, Ovidiu T, Arielle S, William F, Anila N, Samara P, Zeev R. Correlates of tinder use and risky sexual behaviors in young adults. *Cyberpsychol Behav Soc Netw*. 2017;20(12):727-34.
28. Gillett R. Intimate intrusions online: Studying the normalisation of abuse in dating apps. *Womens Stud Int Forum*. 2018;69:212-19.

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