Review Article

Online dating: A motivated behavior during pandemic

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Abstract
Online dating received a recent upsurge since the outbreak of pandemic with most people confining themselves to virtual dating. This paper conceptualizes and draws conclusion from the existing literature stating the factors responsible for an increase in online dating. Owing to home restrictions and social distancing, people turned to online dating apps mainly to maintain the social connection and interaction, get introduced to potential suitors and also worked as a stress buster. Besides these factors, abundant time at hand and the chance to be true and comfortable in one's own space, such factors served to cope with the threat faced on safety and belongingness through use of online dating. Consequently, online dating applications are seen favorable by the majority due to its accessibility, anonymity and lesser emotional exhaustion because of perceived behavioral control.

Introduction

With COVID-19 our everyday activities and errands have witnessed shift to the online mode. From accessing information online, online transactions, online purchase, virtual learning, running businesses online, work online from home to finding potential partners online, the internet has transformed lives of individuals drastically. Earlier, the e-mode was a choice as people could always go back to the offline or the manual mode for carrying out their chores. However, owing to the present pandemic times, people are left to stick to the e-mode only. As people were home confined due to strict lockdowns in and around the globe, the internet observed a surge in online dating in several countries, including India (Rodgers, 2020).

A few of the prominent dating applications include, Zoosk, OkCupid, eHarmony,

Tinder, Bumble among others which serve to both heterosexual and homosexual populations. These dating applications present to the interested audience a precisely put combination of three aspects which further increase their likeability, usage and popularity. These three features are, firstly, providing access to potential romantic partners, i.e., being exposed to potential partners whom users will be unlikely to meet in person had they not been on the platform; secondly, allowing communication with potential romantic partners, i.e., using various computer mediated communication to know the suitor/suitress before meeting in person and lastly, matching with compatible romantic partner, i.e., websites employ an algorithm to match two people based on a number of selection criteria rather than a random matching of individuals (Finkel et al., 2012). These aspects pose as the benefits of 'online' in the phenomenon of dating.

Advantages of online dating

There is a considerable positive side to online dating. They serve as platforms with the provision of services and tools to people to find partners online, beginning with dating and perhaps culminating into a long-term relationship of marriage (Finkel et al., 2012; Golbeck, 2015). A study by Couch and Liamputtong (2008) on the use of internet to meet sexual partners interviewed and did an in-depth analysis with 15 such users. The study revealed several potential benefits including no or minimal deceit. Anonymity can be maintained unless both the sides want to meet face-to-face; ability to filter identity; allows opportunity for better connectivity and enhanced social as well as sexual network; gives access to not only like-minded people but also a better geographical connectivity and that online dating allows opportunities to manage online contacts and plan prospective meetings before sexual interactions. As such, online dating can offer

valuable health protection, as "it allows users to predetermine safer sex".

Besides, online dating is also promising in offering access to partners who otherwise might lack it, providing computer-mediated communication to promote greater engagement with each other and the matching algorithm may help in deducting those individuals who might not turn out to be potential romantic/relationship partners (Finkel etal., 2012).

Disadvantages of online dating

While there are many advantages and increases of online dating. Online dating has its own disadvantages or harm. Online romance scam has become a new fraud since 2008 (Whitty & Buchanan, 2012). A study estimates 230,000 citizens in Britain may have fallen victim to online dating scam and the UK National Fraud Authority reports an estimation of over £38 it takes into account of fraud cost in the United Kingdom in 2011 (Whitty & Buchanan, 2012).

Fake accounts - Individuals over the web are not genuine about what their identity is, so you may get feline fished. To abstain from being defrauded by a phony profile, have a go at downloading the profile image of the individual and doing a Google picture search. On the off chance that the individual is using another person's image, you'll have the option to see by the outcomes you find. It's additionally a warning if you've been 'dating' somebody for quite a while, and they will not meet face to face - it could imply that they are not who they state they are.

Scams- Online well-being and security aren't constantly ensured in the digital world. As much as feel you confide in your online accomplice, you may likewise be a casualty ofdefrauding and fraud. Regardless of how hard you succumb to somebody on the web, don't give them your own subtleties like financial balance subtleties, place of

residence, ID number, individual pictures or whatever else that gives somebody individual admittance to your life particularly if you've never met them and fabricated trust after some time.

Danger of getting explicitly attacked

You won't have a clue about an individual's actual aims, particularly on the off chance that you met them on the web, so it's simple for you to succumb to any wrongdoing, including rape. Many sex wrongdoers look for their next casualties on the web and frequently profess to be youthful all together, draw individuals a lot more youthful than them. In case you're underage, don't meet somebody you met online alone, under any condition.

Increase in online dating during COVID-19

When an individual is faced with a threat upon their basic needs, there is a motivated behaviour to reduce resultant distress. Pandemic opens new challenges to human connection and the perceived control over these goal-directed behaviour (Baumeister & Leary, 1995). Individuals are faced by a constant flux at this pandemic wherein the need for safety, need for belongingness and need for esteem is threatened. Therefore the sudden surge from 0 to 15% rise between the months of Febraury and June in usage of dating application questions the motive of individuals to seek solace in an online dating forum (Nabity-Grover Cheung & Thatcher, 2020). With the imposition of countrywide lockdown, there has been a rise in frequency, amount of usage of online dating apps and an increase in number of users of such applications. It has been observed based on the latest statistics that 30% young Indians have admitted themselves to be frequent users of OkCupid, a dating application (Roy, 2020). The application observed a boom in subscription after the first week of lockdown in March, 2020, with subscriptions increased

by 70% in India alone. OkCupid witnessed 26% increase in online conversation and 12% increase in matches. Quackpack, another dating platform observed a daily user signup up to 80%. Similarly, on Bumble, there was upsurge in messages with a 29% increase with two in five turned meaningful. In addition, the application also observed 17% increase in video calls since the initiation of the lockdown (Roy, 2020; Majumdar, 2020; Sharma, 2020). Viewing such mounting interest in and usage of dating application or websites, the applications' developers also came up with new features to further increase their profits and make online dating a rather pleasant process. For instance, Bumble, a dating app put forth a new feature of "Virtual Dating", which refers to a badge that appears in profiles of users who are open to date via video chat. Likewise, Tinder not being far behind, launched a "Global Mode", wherein users are served potential partners from all over the world regardless of where they live, whereas earlier the location was restricted to only a few miles (Jennings, 2020). An online survey found that 8% men and 23% females would actually date after the pandemic is over (John, 2020).

A huge outpouring of users of online dating application led to increased online dating during COVID-19, indicating that majority of the people benefitted from their engagement in online dating as it might have allowed them to remain connected, maintain the zeal, look forward to new meetings and potential suitors with the ease of being at home. With more time at hand to learn about each other rather than rushing into meeting within the first month of initiating conversation and sparing the anxiety of rushed physical intimacy, online dating also worked as a de-stressor to many during this period of pandemic.

Nonetheless, to have been home restrained for nearly more than half a year for now, the current pandemic might bring about a

change in how people usually used to date. A research found that participants with high perceived vulnerability to disease (PVD) scores displayed decreased level of interest in prospective online dating partners, even when partners were attractive as compared to people with low perceived vulnerability to disease (PVD) scores (Graff, 2020). Besides, users will continue to do video chats more often relative to previous scenario before meeting the potential date (Sigalos, 2020). For instance, OkCupid reported that 91% Indians will continue dating post lockdown (Business Insider, 2020).

Factors responsible for increase in online dating

Safety: Pandemic poses challenges in the form of threat to safety especially health factors and the environmental factors which restrains physical contact. At this pandemic, the research posits factors that drive fear in an individual which are fear of threat to physical health, fear of threat to the significant other, fear of the unknown and fear of inaction. At this broad spectrum of mental distress, the fear of uncertainty and appraisal of future outcomes leads to a sense of loss in interpersonal forum among individuals. This safety risk has forced individuals to distance from their loved ones and the perception of 'closeness' is no longer present which therefore has increased usage of dating applications (Schimmenti Billieux & Starcevic, 2020).

Social connectedness and increased sense of loneliness: As a means of overcoming loneliness, an individual seeks to form emotional bonds with people. Dating and relationships are one such area which had been crucial for health and well-being. While romantic relationships had always been a basic need for individuals as they fulfil the need to be loved and accepted. The single most factor that drives people to decreased quality of life is the inability to fulfil interpersonal needs (Pietromonaco & Overall, 2020). Individuals when deprived of social contact face significant amounts of negative emotions as being subjected to loneliness and perceived isolation. Online dating application is one such application that has experienced a rapid surge during this COVID-19 as a means attaining the ends to the global social isolation. The perceived loneliness during the lockdown has led to scan for affection on the web to reduce loneliness and to connect with others. Research points out that text messaging and virtual contact with a person reduces perceived loneliness (Marston et al., 2020). A study conducted by Roberts and David discusses on the belonginess hypothesis and information foraging theory which emphasizes on a phenomenon called as 'Fear of missing out' which has been perceived as pervasive apprehension of losing out on things which others supposedly possess. This FoMO (Fear of Missing Out) behavior is increased with an increase of social deprivation and when the basic need is threatened. Narendra Klinger, a senior clinical therapist and psychotherapist from Mumbai talked about the essential need to meet with distinct people was intensified after lockdown, as many people were not happy with their connections or everyday exercises during the lockdown period. "Limited by a wide range of limitations during lockdown, dating applications picked up notoriety as they went with the opportunity to 'be' and 'collaborate' with others", he said (Kinger, 2020). Therefore, individuals find an outlet to decrease perceived loneliness through the use of dating apps (Roberts & David, 2020).

Lack of positive reinforcement: In light of the nationwide lockdown and lives of people coming to a halt, majority of them experienced removal of positive reinforcement from their immediate environment. Applications like Tinder create

an intermittent reinforcing reward system. Matches act as periodic rewards. Based on variable ratio (sometimes it takes two swipes, sometimes it takes 20, the anticipation of an eventual match combined with unpredictability of reinforcement leads to continued swiping).Perceived satisfaction then continuously reinforces an individual to use online dating app. In addition, these dating applications require less investment, hence, low stakes, but the subsequent pleasantness and enjoyment these return to the users may also serve as positive rewards lasting till the next swipe or action taken on the apps (Schachter, 2015).

Entertainment and playfulness: With the imposed nationwide lockdown, monotony was a contextual factor which drove people towards entertainment. To reduce boredom, online dating apps provide individuals a platform to seek novelty. Due to being home-bound and work from home lifestyle, people mostly have spare hours at hand. Besides, developing new hobbies like reading books, cooking, gardening, art and craft, people regardless being young or middle-aged turned to dating apps for fun purpose. Owing to current social distancing times, with no compulsion to meet in-person, users preferred to spend time knowing potential partners and in the process dating a few with mutual discretion to keep it light and slow (Chakraborty, 2020; Mohan, 2020).

Marital conflicts/discords: The compulsion to stay at home during the pandemic while no connection with the outer world can lead to turmoil in the family. The kind of turmoil leading to domestic violence as well as divorces. Thus, due to increased marital conflicts during lockdown, use of dating applications has seen an upsurge. According to Kolkata-based clinical psychologist Anindita Chowdhury, the lockdown has turned into an ordeal for many couples. "There are no external factors at play. There

are no escapes " (Chakraborty, 2020). With the lockdown, the "me space" has fallen. As couples are telecommuting and going throughout the day together, they are feeling the heaviness of their connections. The repressed feelings of hatred towards one another and other relatives, and more prominent open doors for expected clashes can disturb family elements. In most pessimistic scenarios, it might lead couples to re-examine their similarity. Online and digital technologies continue to both shape and be shaped by social practices (Dutton &Peltu 1996), and the ways in which people engage in romantic and sexual relationships have been especially impacted by the proliferation of the Internet.

In search of commitment: Shackled inside a box like structure, the lockdown has made the urge among individuals to be with someone to share their emotional well-being as well as other turmoil they are going through. The search for commitment has led to increase use dating applications. Rusbult's investment model of responsibility (1980, 1983) is a hypothesis of sentimental connections that clarified why a few people may stay in a relationship while others may not (Le & Angnew, 2003). It depends on four components: fulfilment, investment, comparison with alternatives and commitment. The current pandemic rectifies the investment model with the urgent need to be emotionally connected, need to be satisfied, no comparison with alternatives, and commitment over calls or messages.

Emotional intimacy: During the lockdown, the individuals are lacking an aspect of interpersonal relationships that varies in intensity from one relationship to another and varies from one time to another, much like physical intimacy. The need to seek love, care and acceptance from a close partner called as emotional intimacy. The construct of loneliness evolves from two

kinds of loneliness: Social loneliness and emotional loneliness. Most of the online platform might address social loneliness through video chats, audio calls and other social media platforms but the emotional loneliness during the pandemic is more subjective as people feel alienated without emotional support (Odekerken-Schr€ et al., 2020). Pandemic poses a threat in the form of emotional alienation as individuals long for emotional intimacy from a potential partner which also explains the surge in online dating.

Interplay of online dating and socio-economic status

Age

India has seen an increasing number of online dating among the millennials as young as 18 who are finding partners using this platform (Jha, 2020). There is difference in the age range across different countries as U.S users are between the middle 20s and late 40s and Indian users are young as late teens to late 20s (Kats, 2020). Other than the millennials, adults between 40s and 60s also have made use of the dating platforms during these times..

Marital status

Apart from the millennials, there are also individuals who are married had reached out for online dating platforms since the outbreak of covid-19. As growing evidence suggesting that partners during lockdown are even intolerable to the current isolation has wanting to seek dependency through online extra-marital affairs USA online dating statistics indicates there has been 17,000 new users every day since the pandemic and continues to rise. The current distance between couples is also difficult to be resolved due to the inability to seek a marriage counselor or therapist and most of it in the verge of divorce after a pandemic (Sparks, 2020).

Gender

Among the countries with highest users, Italy marks the most and, in every country, there are higher number of female users (Marston et al., 2020). Most of the Indian users comprise of male populations until 2018 and the shift has changed recently to females as growing number younger generations in India and other Asian countries (Jha, 2020). Millennials are well-aware of the needs and expect a socially balanced life due to many females being a working professional. Due to these commitments, many females are finding an accessible forum to explore dating opportunities and it serves as a secure platform for female users. Its been noted that female users are very careful on the swipes and choose very carefully compared to the male users. While a message length of a male to a female is in the ratio of 1:10 and the time gap of male users to get matched is 2 minutes while for females its 38 minutes. These statistics show significantly different approach among the males and females in dating behavior (Iqbal, 2020).

Urban vs Rural

Despite of widespread use of dating applications across the world, India continues to fight the taboo related to finding partners through an online forum. This approach has long been condemned by Indian Society. Even in the western societies, dating in a small town imposed its own challenges of finding a partner appropriate to their interests (Vasquez, 2020). Since, its seen as a favorable option, smaller towns are also making use of the modality. With current statistics indicating that most of the users in India come from the major metro cities and fewer rural towns compose 20-30% of the total users. Worldwide statistics indicating that their users are mostly of the major influential cities and significant number of users from smaller towns. This shift can be attributed to the growing western

influence, online forum posing less perceived risk and for greater convenience (Jha, 2020).

Occupation

Social distancing has led to many individuals face problems with perceived loneliness and most of the individuals trying to bridge the romantic distance in their dating life. Initially, cultural orientations tend to influence the choice of partner profession in the online dating platform but recently women preferring more technology and creativity filled jobs among their male partners (Broster, 2019). While, men preferring women from the science or professional domain. With higher number of student population, there is a significant distinction in the choice of professional courses preferred. With creative field and professional science areas being pre-dominantly favored (Reynolds, 2016).

Model of online dating behavior

The current model of online dating brings in factors related to human connectedness through online dating platforms at the time of COVID-19 outbreak through the literature stated. The process is seen as a distress reduction model to supposedly decrease the threat faced on the two primary areas of human needs: safety and belongingness. An individual experiences enhanced negative emotions when primary needs are deprived and hence motivated to reduce the distress. The distress is either faced on the physical health such as safety related to COVID-19 infection, mental health such as distress and depression from deprivation of normal functioning or social factors such as rejection, isolation and longing due to loss of close relationships (Schimmenti Billieux & Starcevic, 2020). While the threat is processed, individuals form goal directed intentions as explained through the theory of planned behavior (TPB) given by Icek Ajzen in 1985 wherein he brings up three main components such as the attitude, subjective norm and perceived behavioral control. The resultant behavior is coping to the threat using some form of modality that decreases the threat on their primary needs and reduces distress (Bonilla-Zorita Griffiths & Kuss, 2020).

The theory of planned behavior in the light of pandemic, online dating application is used by forming an intention to form emotional bonds with a person who could be depended upon and the subjective norm is considered through the positive word of mouth about online application through friends and internet serving as a reference (Han et al., 2020). The reference if given through trustworthy sources such as a user, close friend and trustable news articles increases compliance. And finally, the individual need to have perceived behavioral
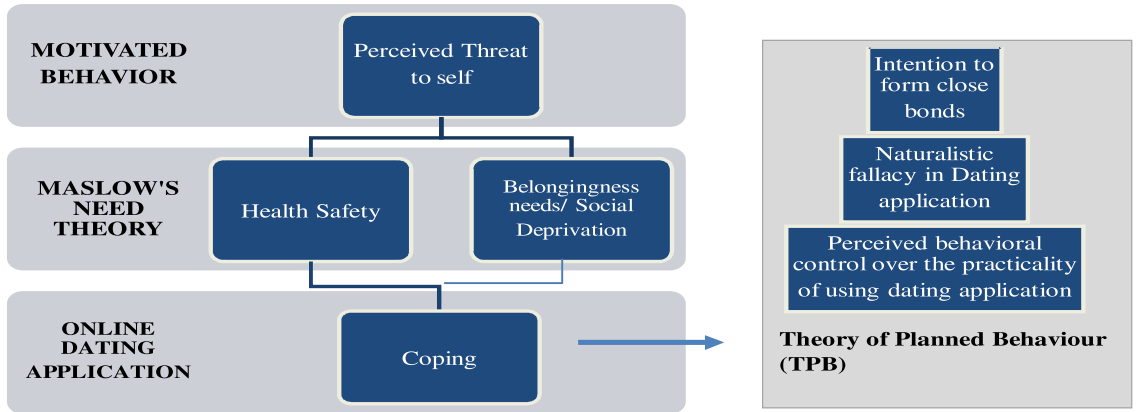

Figure 1: Model of online dating behaviour during pandemic

control such as the practicality of the use of dating applications and the affordability which leads to a decision. Since reality dating is not possible at this pandemic, the perceived behavioral control is decreased for seeking real-life connections. Because of it, online dating application serves as a modality to cope to the threat of connection (Bonilla-Zorita Griffiths & Kuss, 2020).

Online dating application: A harmless venture

Most of the advantages of online dating platforms during the COVID-19 situation is favourable for people because of three main factors: accessibility, anonymity and less emotional exhaustion (Seidman, 2013; Marston et al., 2020). The accessibility is one of the rewarding advantages of digital platforms as it provides perceived behavioural control despite of the pandemic outbreak for individuals as mentioned in the theory of planned behaviour (TPB) (Lieberman & Schroeder, 2020). Individuals are confined to their homes and accessibility is attained through digital medium such as online shopping, food ordering, google meet sessions and even dating is taken to a whole new light (Clement, 2020). The anonymity is the second rewarding platform as the danger of being exposed or being vulnerable is lesser as most individual have a sense of safety over the use of online dating application. When an individual is self-disclosing through some form of online forum, the perceived risk sensed by individuals is lesser compared to the physical presence (Andreassen, 2015). The third aspect talks about the rejection sensitivity faced by the online dating application. Research conducted on the emotional well-being of individuals in an online dating platform showed that individuals had reduced rejection sensitivity compared to real-dating experience as the amount of emotional investment and expectation is lesser due to a more casual approach in online dating (Mahdavifar, 2020).

Future prospectus of online dating

Given the current literature on online dating, prospective future studies can aim to robustly understand online dating as a social phenomenon, with crucial emphasis on which and how psychological theories or models may explain this trend to find partners online. Apart from the quantitative evidence, qualitative analysis should be taken up by conducting in-depth interviews or focused-group discussions with users of dating apps to gauge subjective insight on the pros and cons of online dating. Also, longitudinal researches can aid in illustrating what psychological factors play an important role in continuing or declining from such services. This way, it may illustrate the potential perils of withdrawing from online dating as well as the maintenance factors. A cross-cultural study may help in delineating the culture specific along with the common aspects posing either as likely positives or negatives in online dating and applications.

Conclusion

With the lockdown and easy accessibility to internet, online dating has shown an upsurge. Factors responsible for increase in usage of dating applications amongst people include safety, social connectedness and increased loneliness, lack of positive reinforcement, entertainment and playfulness, marital conflicts/discords, in search of commitment and emotional intimacy. Moreover, individual's use of dating application can be understood from a view point of Maslow's need hierarchy theory. Threat to basic needs like health safety and belongingness will motivate people to cope using dating applications, which in a way is makes it convenient and feasible given the situation amid pandemic. Due to the uncertainty about the duration of this pandemic, dating apps will see substantial increase in its usage as more people will resort to it.

References

Andreassen, C. S. (2015). 'Online Social Network Site Addiction: A Comprehensive Review', Current Addiction Reports, 2(2), pp. 175-184.

Baumeister, R. F. and Leary, M. R. (1995). 'The Need to Belong: Desire for Interpersonal Attachments as a Fundamental Human Motivation', Psychological Bulletin, 117(3), pp. 497-529.

Bonilla-Zorita, G., Griffiths, M. D. and Kuss, D. J. (2020). 'Online Dating and Problematic Use: A Systematic Review', International Journal of Mental Health and Addiction. Springer, pp. 1-34.

Broster, A. (2019). 'The Most Popular Job On Dating Apps Reveals A LOT About Who We're Swiping Right On', Bustle, 28 February. Available at https://www.bustle.com/p/which-jobs-are-most-popular-on-dating-apps-this-new-study-has-the-answers-boy-am-i-in-the-wrong-profession-16403214 [Last Accessed on 10/09/2020]

Carpenter, C. J., McEwan, B. (2016). The players of micro-dating: Individual and gender differences in goal orientations toward micro-dating apps. First Monday, 21, 387-403. doi:https://doi.org/10.5210/fm.v21i5.6187Cha dwick-Jones, J. K. (1976). Social Exchange Theory: Its structure and influence in social psychology. Academic Press.

Chakraborty, D. (2020). 'Why Indians Are Flocking To Dating Apps To 'Beat' The Lockdown', Huffington Post, 24 May. Available at:https://www.huffingtonpost.in/entr y/indian s-dating-applockdown_in_5ec9796dc5b607 a94dedb946 [Last Accessed on 11/09/2020].

Chakraborty, D. (2020). Why Singles Are Doing Better Than Couples In The Lockdown. Retrieved from https://www.huffingtonpost.in /entry/singlescoupleslockdown_in_5eb7a851c 5b647110c9281b?ncid=tweetlnkinhpmg00000001

Choma (n.d.). Dangers of online dating. [online] choma.co.za. Available at: https://choma.co.za/ articles/716/dangers-of-online-dating.

Couch, D & Liamputtong, P (2008). 'Online Dating and Mating: The Use of the Internet to Meet Sexual Partners', Qualitative Health Research, vol. 18, no. 2, pp. 268-279.

Clement, J. (2020). 'U.S. online dating platform usage amid COVID-19 pandemic 2020', Statistia, 19 June. Available at: https://www.statista.com /statistics/1114386/online-dating-usag e-during -covid-pandemic/ [Last Accessed on 10/09/ 2020]

Dutton, W.H., Dutton, P. of A.S. of C.W.H. and Peltu, M. (1996). Information and Communication Technologies: Visions and Realities. [online] Google Books. Oxford University Press. Available at: https://books. google.co.in/books/about/Information_and_C ommunication_Technologi.html?id=ADRlMCu JLToC&redir_esc=y [Last Accessed on 15/09/2020].

Finkel, EJ, Eastwick, PW, Karney, BR, Reis, HT & Sprecher, S (2012). 'Online Dating: A Critical Analysis from the Perspective of Psychological Science', Psychological Science in the Public Interest, vol. 13, no. 1, pp. 3-66.

Golbeck, G. (2015). Introduction to Social Media Investigation, Syngress Publishing, Switzerland.

Graff, M. (2020). 'Will the Coronavirus Threat Lead to Female Infidelity? An Evolutionary Perspective', Psychology Today, 28 May. Available at:https://www.psychologytoday. com /intl/blog/love-digitally/202005/will-the-coronavirus-threat-lead-female-infidelity [Last Accessed on 11/09/2020]

Han, H. et al. (2020). 'Impact of environmental CSR, service quality, emotional attachment, and price perception on word-of-mouth for full-service airlines', Sustainability (Switzerland), 12(10). doi: 10.3390/SU12103974.

Iqbal, M. (2020). 'Tinder Revenue and Usage Statistics (2020)', Business of Apps, 30 October. Available at: https://www.businessofapps.com / data/tinder-statistics/ [Last Accessed on 11/09/ 2020]

Jennings, R. (2020). 'Dating and Tinder during coronavirus: What's the point?', Vox, 28 May. Available at: https://www.vox.com/the-goods/21271138/dating-tinder-coronavirus-quarantine [Last Accessed on 10/09/2020).

Jha, L. (2019). 'Online dating apps finding more love in India as user base triples in 2018', Mint, 11 June. Available at: https://www.livemint.com/ news/india/online-dating-apps-finding-more-love-in-india-as-user-base-triples-in-2018-15601

86024202.html [Last Accessed on 11/09/2020]

John, C. (2020). 'Dating Apps During Lockdown: How Are People in India Swiping?', The Quint, 03 April. Available at:https://www.thequint.com/tech-and-auto/tech-news/how-indians-are-using-dating-apps-during-lockdown-due-to-coronavirus [Last Accessed on 10/09/2020).

Kats, R. (2020). 'Love in the Time of the Coronavirus: Dating Apps Are Growing and Becoming More Virtual', eMarketer, 21 August. Available at: https://www.emarketer.com/content/love-time-of-coronavirus-dating-apps-growing-becoming-more-virtual. [Last Accessed on 05/10/2020].

Kinger (2020). Offline-only dating apps see surge in users, offer virtual activities amid the lockdown - ETtech. Retrieved from https://tech.economictimes.indiatimes.com/news/mobile/offline-only-dating-apps-see-surge-in-users-offer-virtual-activities-amid-the-lockdown/75586848

Le, B., & Agnew, C. R. (2003). 'Commitment and its theorized determinants: A meta-analysis of the investment model', Personal Relationships, 10(1), 37-57.

Lieberman, A. and Schroeder, J. (2020). 'Two social lives: How differences between online and offline interaction influence social outcomes', Current Opinion in Psychology. Elsevier Ltd, 31, pp. 16-21.

Mahdavifar, S. (2020). 'The relationship between rejection sensitivity of online dating app users' mental well-being and self-esteem'.

Majumdar, M. (2020). 'Dating apps see rise in users during COVID-19 lockdown', The Hindu, 28 March. Available at:https://www.thehindu.com/society/dating-apps-see-rise-in-users-during-covid-19-lockdown/article31191764.ece [Last Accessed on 10/09/2020).

Marston, H. R. et al. (2020). 'OK Cupid, Stop Bumbling around and Match Me Tinder: Using Dating Apps Across the Life Course', Gerontology and Geriatric Medicine, 6, p. 233372142094749. doi: 10.1177/2333721420947498.

Mohan, R. (2020). 'Social distancing, WFH: City youth turn to dating apps to chase boredom away', DT Next, 23 March. Available at: https://www.dtnext.in/News/City/2020/03/23034003/1221418/Social-distancing-WFH-City-youth-turn-to-dating-apps-.vpf]Last Accessed on 11/09/2020].

Odekerken-Schr€, G. et al. (nd) 'Mitigating loneliness with companion robots in the COVID-19 pandemic and beyond: an integrative framework and research agenda', Journal of Service Management Emerald Publishing, pp. 1757-5818. doi: 10.1108/JOSM-05-2020-0148.

Pietromonaco, P. R. and Overall, N. C. (2020). 'Applying Relationship Science to Evaluate How the COVID-19 Pandemic May Impact Couples' Relationships', American Psychologist. doi: 10.1037/amp0000714.

Reynolds, E. (2020). 'Tinder reveals the 'most desirable' job titles in online dating', Wired, 25 February. Available at https://www.wired.co.uk/article/tinder-popular-professions#:~:text=The%20five%20most%20attractive%20professions,%2C%20PR%2Fcommunications%20and%20teacher. [Last Accessed on 11/09/2020]

Roberts, J. A. and David, M. E. (2020). 'The Social Media Party: Fear of Missing Out (FoMO), Social Media Intensity, Connection, and Well-Being', International Journal of Human-Computer Interaction. Taylor & Francis, 36(4), pp. 386-392. doi: 10.1080/10447318. 2019. 1646517.

Rodgers, B. (2020). 'Dating In The Time Of Covid-19', Grazia India, 17 April. Available at:https://www.grazia.co.in/lifestyle/dating-in-the-time-of-covid-19_-4664.html [Last Accessed on 10/09/2020).

Roy, L.C. (2020). 'Covid No Deterrent: Online Dating Soars Amid Lockdown; Many Pair Up Digitally', Outlook, 08 September. Available at:

Schachter, H. (2015). 'Love Me Tinder: A Psychological Perspective on Swiping', Psychology in Action, 16 April. Available at: https://www.psychologyinaction.org/psychology-in-action-1/2015/04/16/love-me-tinder-a-psychological-perspective-on-swiping [Last Accessed on 10/09/2020).

Schimmenti, A., Billieux, J. and Starcevic, V. (2020). 'The four horsemen of fear during the

COVID pandemic', Clinical Neuropsychiatry, 17(2), pp. 41-45.

Seidman, G. (2013). 'Self-presentation and belonging on Facebook: How personality influences social media use and motivations', Personality and Individual Differences. Elsevier Ltd, 54(3), pp. 402-407.

Sharma, K. (2020). 'Love in the times of COVID-19: How dating apps have adapted to the current environment', Business Insider, 07 May. Available at: https://www. businessinsider. in/advertising/brands/article/love-in-the-times-of-covid-19-how-dating-apps-have-adapted-to-the-current-environment/ articleshow/75576484.cms [Last Accessed on 10/09/2020).

Sigalos, M. (2020). 'Why the coronavirus might change dating forever', CNBC, 25 May. Available at: https://www.cnbc.com/2020/05/25/why-the-coronavirus-might-change-dating-forever. html [Last Accessed on 11/09/2020].

Sparks, H. (2020). 'More people cheating with online affairs during lockdown: study', New York Post, 15 July. Available at: https://nypost. com/2020/07/15/more-people-having-online-affairs-during-lockdown-study-finds/ [Last Accessed on 11/09/2020]

Sumter, S. R., Vandenbosch, L., &Ligtenberg, L. (2017). Love me Tinder: Untangling emerging adults' motivations for using the dating application Tinder. Telematics and Informatics, 34(1), 67-78. doi:10.1016/j.tele.2016.04.009

Timmermans, E., & De Caluwé, E. (2017). To Tinder or not to Tinder, that's the question: An individual differences perspective to Tinder use and motives. Personality and Individual Differences, 110, 74-79.

Vasquez, R. (2018). 'As Young People Leave Rural Areas, What Is Dating Like For Those Who Choose To Stay?', Wisconsin Public Road: Wisconsin and the World, 8 May. Available at: https://www.wpr.org/young-people-leave-rural-areas-what-dating-those-who-choose-stay [Last Accessed on 11/09/2020]

Wong, A., Ankee, Yazdanifard, R. and Angel Wong Ankee (2015). 'Global Journal ofManagement and Business Research: E Marketing The Review of the Ugly Truth andNegative Aspects of Online Dating The Review of the Ugly Truth and Negative Aspects ofOnline Dating' Available at:https://globaljournals.org/GJMBR_Volume15/5-The-Review-of-the-Ugly.pdf.