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Sexuality in Digital Era

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Contents

Editorial
Sexual evolution during digital revolution

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The 21st century is the era of the digital revolution. Digital technology has become an integral part of daily life of most individuals. For techno people, the term 'Cloud' has a different meaning, so also the term 'Mouse'. Apple and Blackberry too have different meanings in this digital world. Digitalization has made the tasks of daily life much easier. Internet is playing a pivotal role in communication. The digital revolution brought significant changes in personal, social, professional, and recreational life. It has dramatically changed the educational and healthcare scenario. Digitalization is not limited to the developed or high-income countries. Now, the digital platform is easily available, accessible at an affordable price. As per a recent report, the highest number of internet users live in Asia though the penetration of the internet is high in Europe, North America, and Australia.

With time, people have also witnessed the adverse consequences of digitalization. Excess use of digital technology resulted in technology addiction, which affected all ages and genders (Agarwal and Kar, 2015). Evidences support that people become victims of online sexual abuse, online bullying as well as pornography addiction (Jonsson et al., 2019; Maas et al., 2019; Wéry and Billieux, 2017).

Interestingly, sexuality is also evolved stupendously during this phase of the digital revolution. The impact of the digital revolution on sexual life can be positive or negative. Now, people can search their life-partners through various marriage portals. Digitalization facilitated dating and online friendships. The anxiety and fear encountered in interacting with the strangers and the opposite gender is minimal in the digital forums than direct contact. The beneficial effects of digitalization on sexual life are highly appreciable. At the same time, its negative impacts are also not less.

People get attracted to online sexual content, which is an easy and undaunted mode to gratify sexual appetite. Due to its instant gratifying nature, pornography is highly addictive. Pornography addiction is emerging as an important form of technology addiction in the digital era (Kar, 2016). This problematic form of cyber sex is often extreme and impairing for the individuals (Wéry and Billieux, 2017).

Sexual violence in the form of cyber bullying, revenge porn has emerged. Many people seeking intimacy or friendship on online platforms become victims of cyberbullying and revenge porn. Several reports of crimerelated to cybersex have flooded the media during recent times.

Digitalization is defining sexuality in a new fashion. It has given birth to several new psychopathologies, which have not yet received any place in the existing diagnostic systems (except Internet Gaming Disorder in DSM-5). There is a need to understand the emerging sexual-psychopathologies for prevention, diagnosis and better treatment.

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Review Article

Internet pornography usage among today's adolescents: Clinical implications, assessment, and management

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Abstract

The youth of today is hooked to the Internet via various devices exploring a plethora of agencies, mostly in an unsupervised manner. The growing, inquisitive mind and body of adolescents pave an easy way of exposure to sexually explicit material on the internet. Traditionally, such acts are looked down upon and usually stigmatized in our society. This article purports to look into recent literature regarding the effect of Internet pornography on adolescents' sexual attitudes, behaviors, underlying neurobiological implications, and provide an overview of clinical assessment and current understandings about the management of this problematic behavior.

Introduction

Adolescence is derived from the Latin word 'adolescere' meaning 'to grow up'. Uniquely characterized by a myriad of biological, psychological, and cognitive transitions, it is a critical period of human development. By 3 years of age, a child identifies their gender, followed by the subsequent understanding of gender role and gender-specific behaviors (Kar et al., 2015). Biological (genetic & neuro-hormonal), psychological (individual temperament or personality), vis-à-vis social (parenting, peer, and cultural) factors have a major role in the development of adolescent sexuality (Sales et al., 2013). A multitude of other factors- legal, spiritual, philosophical, political, ethical, moral values, etc. also play significant roles. One salient factor that shapes the sexual beliefs, attitudes, and behavior of today's media-saturated adolescents is sexually-explicit material (SEM) on digital media/ pornography.

The proliferation of internet-enabled technology over the last few decades has facilitated easy and ubiquitous access to the internet, bringing internet pornography to the mainstream. This has brought about a definite change in the way people encounter

and consume SEM. Even though people of all ages are exposed to these, recent research shows a significant increase in the number of adolescents who are being exposed to SEM online, either accidentally or intentionally and they consume, create, as well as distribute SEM on the internet (Owens et al., 2012). Statistical data from numerous countries show that more than 90% of adolescents use the internet daily; their online activity being majorly unmonitored and portable (Owens et al., 2012). This ease of access to a plethora of sexually explicit material (SEM) combined with the lack of risk attenuation in most adolescents, underlines the important effects of internet pornography on adolescent sexuality. Because of the widespread easy access of SEM to this large vulnerable section of our societies, it becomes imperative to study its impact on adolescent sexuality in a systemic manner, because it plays an important role in cognitive, social, physical and emotional growth as well. This article aims to look into current literature elucidating the effect of problematic pornography usage on adolescent sexual behavior, in light of clinical implications & neurobiological underpinnings and also provide an overview of clinical assessment and management of such adolescents.

Sexually explicit material (SEM) is described as content *"that depicts sexual activities in unconcealed ways, often with close-ups with (aroused) genitals and of oral, anal, or vaginal penetration"* (Peter and Valkenburg, 2009). Pornographic internet sites (Tsitsika et al., 2009) have been described as *"illicit sites portraying sexual behaviors and practices"*. Pornography has been defined by the U. S Attorney General Commission as *"any material that is predominantly sexually explicit and intended primarily for sexual arousal"* (Mc Manus, 1986). Again, later on, it was described (Reid et al., 2011) as *"any material that (a) elicits sexual feelings or thoughts, and (b) contains explicit images or descriptions of sexual acts involving the genitals"*.

The ubiquitous presence of the internet and its frequent use in daily life makes it difficult to delineate the thin line where internet use turns from purposeful to excessive to compulsive. Problematic patterns of compulsive use of the internet and other compulsive behaviors related to internet pornography use has emerged to be a global trend (Delmonico and Griffin, 2008, Lam et al., 2009), noted across diverse geographical and cultural regions.

Impact of internet pornography on adolescents

Various authors have documented the impact of internet pornography exposure on sexual behavior, attitudes, and beliefs of adolescents.

a. **On sexual attitudes and beliefs:** Even though exposure to pornographic material on the internet can be considered as a normative experience to the majority of growing adolescents, a sense of sexual uncertainty arises due to conflict between sexual beliefs propagated by family and those through pornography. Adolescents exposed to SEM may develop 'unrealistic' attitudes towards sex and 'misleading' attitudes toward relationships (Tsitsika et al., 2009). Also, who are more frequently exposed to SEM unhealthily considers these as a useful source of information about sex and even perceives real-world sex as being 'more casual and primarily physical', rather than 'affectionate and relational', i.e. in light of pornographic depictions. A study (Peter and Valkenburg, 2008) on 962 Dutch adolescents found an increased frequency of viewing SEM to be associated with more sexual preoccupancy *("chronically accessible sex-*

related cognitions"). Also, SEM exposure has been established to be a cause and a consequence of believing that women are 'sex objects'. It reinforces an unrealistic 'pornographic script' for body type and sexual performance for own as well as a sexual partner(s) (Löfgren-Mårtenson and Månsson, 2010).

However, some studies on adolescents demonstrated a relationship between exposure to SEM and positive attitudes toward premarital and extramarital sex (Lo and Wei, 2005), whereas numerous studies demonstrated a positive attitude towards casual sex (Owens et al., 2012).

b. **On sexual behavior:** A study (Lo and Wei, 2005) on adolescents in Taiwan found that exposure to SEM promoted adolescents' acceptance and engagement in sexually permissive behaviors. Similar findings were reported in other studies as well (Braun-Courville and Rojas, 2009, Brown and L'Engle, 2009). Pornography consumption was also positively associated with high-risk sexual behavior, viz. anal sex, intercourse with multiple partners, sex under the influence of substances, etc. (Braun-Courville and Rojas, 2009, Häggström-Nordin et al., 2005). Also, male internet pornography consumers were reported to have earlier initiation to first sexual intercourse and oral sex as compared to controls (Kraus and Russell, 2008). However, another study did not find any association between SEM use and risky sexual behaviors but states a connection with adolescents' sociosexual development, sexual beliefs, and attitudes (Koletic et al., 2019).

c. **Sexual aggression and violence:** Studies show established link of pornography exposure with sexual aggression, harassment, sexual violence as well as an attitude about violence towards women and even bestiality (Malamuth and Huppin, 2005, Brown and L'Engle, 2009, Alexy et al., 2009). However, an interplay of a multitude of risk factors determines the likelihood of an adolescent acting in a sexually aggressive manner following pornography exposure. A national survey conducted at the University of New Hampshire (Ybarra and Mitchell, 2005) found no established link with sexual aggression for the majority of males. However, they found supporting evidence that male users who have 'predisposing risk levels' for sexual aggression and are frequent SEM users, actually exhibit more than four times greater levels of sexual aggression. And interestingly, adolescents who were exposed to nonviolent SEM were found to be 'equally likely' to exhibit sexually aggressive behavior as compared to those who had no exposure to nonviolent material (Ybarra et al., 2011).

d. **On social behavior:** An Israeli study (Mesch, 2009) on adolescents aged 13-18 years found an inverse relationship between the degree of social interaction and bonding with the consumption of sexually explicit material. Also, more pornography consumption had a significant correlation with a lesser degree of social integration, specifically related to school, family, society, and religion. SEM consumption was found to be associated with delinquency, depressive symptoms, and emotional maladjustment (Ybarra and Mitchell, 2005). When exposed to pornography in early adolescence, it contributes to antisocial behavior, truancy, manipulative behavior and forced sexual intercourse (Alexy et al., 2009).

It would not be overzealous to mention hereby, that, majority of the current evidence reinstate the hazardous impact that is traditionally and culturally associated with exposure of adolescents to Internet pornography.

Neurobiological implications

1. Pathological impulsive behaviors such as internet use, gaming, pornography, compulsive sexual behavior, and gambling share neural processes similar to substance addiction. They affect the dopaminergic neurons of the 'reward circuit', involving the ventral tegmental area and nucleus accumbens (NAc). Dopamine level dysfunction in this tract is associated with impulsive and risk-taking acts.

*   'Supernormal stimuli'-Response to an artificially created stimuli overrides an evolutionarily developed genetic response (Love et al., 2015). Chronic internet pornography overuse is highly stimulating. It activates our reward system to levels which are higher than that were typically encountered by our ancestors in course of evolution. This kick-starts the circuit of addiction; and these processes, in turn, induce neuroplasticity in the reward circuitry.

*   Common reward-seeking behaviors exhibited by adolescents (like the pursuit of money, novelty, social connections, sexual activity, and substance use) promote growth and learning. So, excess of reward-seeking temperamental tendencies may be associated with a vulnerability to the development of high-risk behaviors (Casey and Jones, 2010).

2. An MRI study (Kühn and Gallinat, 2014) revealed that longer exposure and more hours/ week of internet pornography correlated with a lower volume of grey matter in the right caudate nucleus, while subjects with more years and more hours of use had lower activity in left putamen in response to sexual images. In light of earlier fMRI studies that show putaminal activation during sexual arousal, the authors propose that these putamen changes may reflect tolerance brought about by desensitization to sexual stimuli. The subjects with more amount of SEM consumption had less connectivity between the right caudate nucleus and left DLPFC (dorsolateral prefrontal cortex)- this finding has been noted in heroin addicts (Wang et al., 2013).

3. As compared to the adult brain, adolescents have been found to have functional differences (fMRI) in the frontal cortices and in the striatum, the regions associated with executive control and affect regulation, respectively.

*   Adolescents lack the maturation of frontal cortical circuitry to exert adequate cognitive control to suppress inappropriate sexual thoughts and behaviors elicited as a result of SEM exposure.

*   Deficits in executive function, decision-making capacity, impulsivity, and affective regulation has been demonstrated, but any conclusive link is yet to be found (Owens et al., 2012).

*   Earlier maturation of limbic systems as compared to the prefrontal cortex (PFC)in adolescents, which has been proposed to create a bias for stimuli that provoke prominent emotions (i.e., emotionally salient stimuli) over inhibitory control (exerted by the PFC) (Casey et al., 2011). Also, dysfunction in the prefrontal top-down control over the subcortical limbic system causing

hyper-activation of the ventral striatal motivational circuit has been demonstrated (Galvan et al., 2006).

4. Other neuropathways involved:

◆ Sexual arousal elicited by visual pornographic stimuli activates other neural pathways mediating other functions like- cognition, motivation, emotional arousal, and somatosensory experiences (Redouté et al., 2000).

◆ Picture-superiority effect- Cortical processing and encoding of pictorial stimuli in a more prominent manner when compared to other stimuli; has been found among adolescents (White house et al., 2006). This facilitates the recognition and retention of visual information over other kinds of stimuli.

Clinical assessment

An adolescent with problematic consumption of internet pornographic material can present to a clinical setting with this very problem or with prominent behavioral complaints or problematic pornographic viewing might emerge as a coincidental finding in course of the assessment of other psychological/ psychiatric ailment.

The primary method of assessment constitutes a detailed and in-depth clinical interview. Detailed assessment of the pattern, extent, and consequences of use and resulting impairment if any should be enquired. Detailed history, mental status examination, and detailed physical examination should help in the identification of medical or psychiatric comorbidities (depression, anxiety, obsessive-compulsive, or other impulse control disorders). A bio-psycho-social formulation should provide relevant information about factors impacting the problematic use. This can be followed by a motivational interview if the adolescent fulfills the criteria for internet addiction.

Diagnosis

Since pornography addiction is yet to be included in any classification system, a meticulous clinical assessment is the mainstay of diagnosing the problem. Here, the diagnostic criteria for Internet addiction and compulsive sexual behavior disorder are briefly discussed to aid in clinical assessment.

a. A proposed **internet addiction diagnostic criteria** (Tao et al., 2010) consists of 3 criteria: symptom criterion (seven clinical symptoms), functional and psychosocial impairment criterion, course criterion (at least 3 months, with at least 6 hours of non-essential internet usage per day) and exclusion criterion (related to psychotic disorders).

    A score of 2 + 1, i.e., the first two symptoms (preoccupation and withdrawal symptoms) and at least one out of the five other symptoms (tolerance, lack of control, continued excessive usage despite knowledge of negative effects/affects, loss of interests excluding internet use, and use of the internet to escape or relieve a dysphoric mood)is necessary for a diagnosis.

b. **Compulsive sexual behavior disorder** has been proposed as an impulse control disorder in the ICD-11. It is characterized by a persistent pattern of failure to control intense, repetitive sexual impulses or urges, resulting in repetitive sexual behavior over an extended period (6 months) that causes marked distress or functional impairment.

    The behavioral pattern is manifested by one or more of a) engaging in repetitive sexual activities has become a central focus of the person's life resulting in neglect of health and personal care or other interests and responsibilities; b) numerous unsuccessful efforts to control the behavior; c) continues to engage in repetitive sexual behavior despite adverse

consequences; or d) continues to engage in the activity even while they derive little or no satisfaction from it.

c. **Rating scales** can help in assessing the severity of the problem. Internet Addiction Test-a 20 item scale; can help assessing specific impairment in areas of an individual's life due to excessive internet use. Other scales available are-Internet Sex Screening Test - Adolescent (ISST-A), Problematic Internet Use Questionnaire, Compulsive Internet Use Scale, Chen Internet Addiction Scale, Internet-Related Addictive Behavior Inventory and Pathological Internet Use Scale (Pezoa-Jares et al., 2012).

Management

1. Practical considerations

Working with teenagers itself poses a big challenge, even more so while working with such sensitive issue of pornography addiction. The practitioner should attempt to normalize the encountered issues by minimizing shame, and being supportive and nonjudgmental about the problem; this can go a long way in establishing rapport and provide necessary psychoeducation. Being sensitive and aware of adolescents' religious, cultural, and traditional norms is a necessary step. One should never make assumptions or be judgemental about their clients' values.

The adolescent should be guided to understand and establish their sexual boundaries while providing a safe and trusting environment. It will facilitate them taking well-informed decisions while facing real-life situations related to their sexual life. Inclusion of family members or guardians in treatment by teaching behavioral techniques such as filtering or blocking devices, limiting usage time, establishing rules for internet

use, is often helpful. Also, if the professional identifies an addiction, the problem should be managed in lines of motivational enhancement therapy.

2. Non-pharmacological treatment

I. Cognitive Behaviour Therapy (CBT)-Recording and identifying triggers, examining distorted perceptions and beliefs, and recognizing consequences of the behavior has shown benefits in reducing problematic behavior, social interaction, and online time management (Delmonico and Griffin, 2008).

ii. Multimodal school-based CBT- This involves 3 domains: 1) Group CBT for patients; 2) Psychoeducating the teachers; 3) Group cognitive-behavioral parent training. It has shown improvement in emotion and behavioral regulation in adolescents with Internet addiction.

iii. Some researchers had also integrated the principles of motivational interviewing in their studies (Orzack et al., 2006).

iv. Reality Therapy: This therapy assumes that people are responsible for their lives and their actions, feelings, and thoughts. If one is addicted to a behavior, this is because of choice. So, by changing our action and thinking, we can change behavior. It exhibited improvement in addictive behavior and self-esteem in patients (Pezoa-Jares et al., 2012).

v. Multimodal Psychotherapy : It is a combination of various psychotherapeutic approaches and has shown the best evidence till now (Pezoa-Jares et al., 2012).

3. Pharmacological treatment

Not much data could be retrieved from the literature regarding the pharmacological management of excessive/addictive pornography

consumption. However, some studies have evaluated the efficacy of Escitalopram, Naltrexone, and the combination of Citalopram and Quetiapine in treating internet addicts (Pezoa-Jares et al., 2012). Bupropi on has been reported to reduce the craving for internet gaming disorder. Also, methylphenidate is the agent of choice for comorbid ADHD and internet video game addiction; it has been shown to significantly reduce internet addiction scores and usage times.

Preventive strategies

1) Open communication and dialogue between parents and adolescents regarding internet use and sexual behaviors.

2) Involvement of extended families, schools, etc. to educate adolescents about safe internet use through modeling of appropriate and responsible behavior.

3) Promotion of school-based and family-based programs for proper education and prevention of undesirable behavior.

4) Using filtering or blocking devices by parents to prevent inappropriate exposure

5) Changes in governmental policies, laws, and enforcement regarding internet pornography.

Conclusion

Every aspect of human life in the current generation is dependent on technology. Growing adolescents, with their immature brain and technologically-charged culture, are easily lured into the proliferating world of internet pornography. Though merits and de-merits of pornography exposure in itself have continued to be a matter of many a debate, we can conclude that the deleterious impact of excessive internet pornography/ SEM exposure on adolescents i.e., impulsive, compulsive and delinquent behavior, is a global phenomenon as evidenced by the multitude of studies which are not restricted to any specific socio-cultural or religious domain. The behavioral, attitudinal, and social consequences of such exposure have been proven to be detrimental and warrant serious attention. The lack of proper guidelines to diagnose pornography addiction poses a problem for clinicians. Also, questions as to the cut-off where usage becomes excessive, and, in turn, sexually compulsive/ addictive remain unanswered. However, more longitudinal studies focussing on the prospective outcomes in adolescents, exposed to internet pornography, and more qualitative research involving case-studies are necessary for establishing more conclusive findings. Mental health professionals play a pivotal role in safeguarding cyberspace security of adolescents.

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Review Article

Online sextortion

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Abstract

Online sextortion is a pervasive cybercrime. In this, perpetrator tends to harass victims by invading their privacy and threatening to release and disseminate the victim's intimate images in public if they didn't comply with the demand of additional sexual favors or money. Online sextortion has an acute impact on the mind of victims. It is necessary to support and encourage victims in their fight. The present article aims to provide a comprehensive understanding of online sextortion and the preventive measures that can be taken to stop this cybercrime. There is a need for robust legal frameworks to minimize this cybercrime.

Introduction

The digital era has brought in with it the advancement of technology for the use of mankind. Technology has helped humans to achieve great heights. Now, information is just a click away. Anyone from anywhere can easily access the internet to get information and upload information. The internet has become part and parcel of human life. The young generation can be seen using personal computers, laptops, mobile phones, digital cameras, iPods, etc.

Though the internet has its good side and various advantages, it has been used by various people for criminal activities which are commonly known as cybercrimes (Maharashtra Cyber, Home Department, 2020). Cybercrime, as defined by National Cybercrime Reporting Portal, is *"any unlawful act where computer or communication device or computer network is used to commit or facilitate the commission of a crime"* (Indian Cybercrime Reporting Portal, n.d.). Cybercrimes include child pornography, sexting, cyberstalking, online sextortion, etc.

Today, social media is used by everyone in every part of the world. Anyone can become a friend of another without even seeing the person in real life. People have started dating online and have termed it as 'online dating'. While some of these online relationships have become successful, many have fallen into the trap of fake accounts. According to a 2015 United Nations report, up to 40% of young people aged below 18 years self-

generated and shared sexually explicit content online (United Nations Office on Drugs and Crime, 2015). Many of the social media accounts are easily hacked and personal information is used to blackmail and threaten such victims (Goldstein, Tov, & Council., 2018). One such cybercrime is online sextortion wherein perpetrators of such fake accounts or the hackers tend to get intimate and private images of the victim and threaten to release these images if they did not comply with their demands.

This article explains the meaning of online sextortion, makes the readers aware of cases of sextortion that happened around the world. This article also brings to the notice of the stakeholders that there lacks research on psychiatric disorders among perpetrators of online sextortion. The article attempts to highlight the social and psychological impacts on the victim by sextortion. The second part deals with the steps that victims may take when they are being sextorted and the preventive measures to avoid sextortion. In the third part, the author attempts to emphasize the need for the active awareness of the people and the need for the well-framed law on sextortion.

Online sextortion

Online sextortion is a type of extortion in which a person threatens to release or distribute private sexual and intimate images, videos, or any such material of victim if the victim doesn't engage in further sexual activities or does not provide money to the perpetrator (E-Safety Commissioner, n.d.). Online sextortion is a form of sexual harassment, exploitation, coercion, and violence. It is terrifying and de-humanizing. The phenomenon of online sextortion is worldwide. It is more prevalent in countries like U.S.A., Canada, Philippines, U.K., China, Japan, etc.

Online sextortion is a very serious issue. It can take place from anywhere by anyone in the world. It affects the victims emotionally, mentally, and sexually. Online sextortion may vary. Most of these cases involve (Thorn, 2017)

- **Manipulating victims through social media:** Perpetrator mostly gets close to the victims with the help of social media. Perpetrator chats on these social networking apps and creates a type of environment for the victim that he/she fully trusts the perpetrator. Many victims get tricked in online relationships with these perpetrators. Victims send them their private images or videos. Perpetrators then threaten the victims for sexual favors as demanded or money for not leaking the images or videos.

- **Hacking**: Perpetrator may intrude into the social media account or email account or hack the device such as laptops, computers, or mobile phones, etc. wherein the victim has stored his/her private sexual or intimate images and thereby get access to these files to harass and threaten the victim.

There are instances where the perpetrator had threatened to distribute, reveal, or disseminate photos. In the case of United States v. Beckett (the United States v. Beckett, 2010) and State v Stancl (State v. Stancl, 2009), perpetrator pretended to be a teenage girl on social networking sites and tricked schoolboys to send their nude photos. Once the perpetrator had these photos, he threatened to disseminate the photos if they didn't engage in sex or didn't fulfill other sexual demands made by him.

There are instances where the perpetrator had not only threatened but also has disseminated the images and videos. In United States v. Hutchinson (the United States v. Hutchinson, 2014), the perpetrator had created a fake account on social media. He deceived the girls, obtained nude photos, and contact information of them. He

threatened to reveal these photos to the family and friends of the victims if they didn't provide him with more sexual images. He has also released and posted photos online of those who didn't act under his demand.

Online sextortion is prevalent in many cities in India as well. There are cases such as the infamous case of the Punjab and Haryana HC where a girl was blackmailed by three seniors of her university to release her nude images in public. She was also raped by them (Nayar, 2015). Another story is a case of Mumbai where a classmate of a girl maliciously hacked the account of her boyfriend and had access to the nude photos of the girl which she sent to her boyfriend. He wanted and liked the girl and threatened the couple to post the nude photo of the girl in public (Mihindukulasuriya, 2019). There are other cases of Mumbai wherein Cyber Police says that the victims have complained that they have visited a certain pornographic website and thereafter received an email stating their full names and all the contents they have watched along with a message demanding money in the form of cryptocurrency. The message also added that if they didn't comply with the demand, the said pornographic details will be released on the victim's social networking accounts which were also hacked by the perpetrator (Mengle Enter, 2018).

Online sextortion can be done with many victims by a single perpetrator. It can be seen by this case where thousands of underage girls were targeted by a guy. He either hacked their accounts or their devices to obtain their obscene images. He sent emails to girls threatening them to release these images in public or harm their family members if girls didn't send more images of their bare breast and vagina, didn't finger in front of a webcam, or didn't fulfill any such demands made by him.

A survey was conducted by Microsoft in 2017 across 14 countries through Digital Civility Index. Findings indicated that 77% of Indians have reported concerns about sextortion, revenge porn, or unwanted sexual solicitation (Microsoft News Center India, 2017).

Online sextortion takes place with many in India and around the world. This has affected children, adults, vulnerable groups, and established professionals. Not only women but also men, gay, transgender, and gender non-conforming people are affected. Few people report cases of online sextortion because they feel ashamed and degraded and they couldn't bring the case to the concerned authorities (Thorn, 2017).

An insight into mind of perpetrators

The basic question always arises that why a person commits a crime. There can be various reasons ranging from greed, anger, revenge, pride, jealousy to fun, and more. It depends on the type of crime committed (SCCJR, 2016). Online sextortion is a cybercrime which is one of the ways to sexually assault and exploit the victims by threatening them. Some researchers have covered the question as to why perpetrators commit sexual harassment, sexual assault, rape of minors, rape of adult women, etc. But there is lack of research as to why perpetrators commit online sextortion.

Many factors play important role in the commission of this crime. First, it is committed to a digital world. Second, it involves either hacking into victims' device/account or making victims trust the perpetrator to share their own sexually implicit images. Third, there is a threat involved which allows the perpetrator to extract favors from the victim. Fourth, favors can range from victims showing his/her intimate body parts to sexually hurting oneself for the pleasure of the perpetrator. These factors suggest that it is different from the cases of sexual harassment, sexual assault, etc and require in-depth research in the psychology of the perpetrator. By

considering the above four mentioned factors, it can be said that perpetrators do not commit this crime out of rage but it is well planned and executed.

Perpetrators can fall under any of these categories: minor-focused cyber sextortion perpetrators, intimately violent cyber sextortion perpetrators (O'Malley & Holt, 2020), perpetrators of sexual assault against adults and perpetrators who are minor (Robertiello & Karen, 2007) and accordingly the reasons for committing this crime can vary. As a general understanding, this crime can be committed for reasons such as revenge, fun, need for money, substance abuse, or due to personality disorder or psychiatric illness. Yes, there is a possibility that perpetrators may have committed online sextortion due to psychiatric illness and personality disorders. One such psychiatric disorder can be sadism as perpetrators derive their sexual pleasure from inflicting pain and humiliation on victims. There is a need for research in the possible personality disorders or psychiatric illness in perpetrators. Researchers must delve deep into the question and find relevant information as the crime of online sextortion have a great impact on the minds of the victim.

Social and psychological impact of online sextortion on victims

The impact of information & communication technology and the cyber world on society is undeniable. Online sextortion and its effects have a lasting impact on the mind of victims all over the world. The victims feel a loss of control. They go into a stage of grief and develop a sense of shame (Jurecic, Spera, Wittes, & Poplin, 2016).

Even today, sexual matters are not openly discussed in society. They are considered a sensitive subject (Motsomi, Makanjee, & Nyasulu., 2016, Turnball, 2012). In this scenario when perpetrators threaten victims to disseminate and release their private,

sexual, and intimate images in public, then victims feel fear, betrayed, angry, anxious, embarrassed, and guilty (Orick; Herrington; LLP Sutcliffe; Legal Momentum, 2016). Victims who fulfill the demand of the sextortionists, are forced to perform sexual favors such as masturbation, strip dancing, drinking their ejaculation, fingering, fisting, anal fingering, spanking, etc. in front of webcam. Sexual activities are pleasurable but done under coercion or threat, it becomes sexual assault. The time spent under the control of the sextortionist is dreadful and horrendous. All this is real and the harm is irreparable (Jurecic, Spera, Wittes, & Poplin, 2016).

It is easy to blame the victims in cases of sextortion as they are the ones who have clicked their intimate images or videos or sent such materials to the sextortionist. The victims feel that the only option they have is isolating themselves from society (Leukfeldt & Malsch, 2018). Children who are the victim of this are affected the most. They are condemned by their family and friends. Young victims fear their social reputation and reputation of their family in the society. They fear of being terminated from their jobs and prospects. Victims succumbed to these thoughts and therefore fall and fail to come out and lodge complaints against such perpetrators. They always have fear of threats and the release of their private images and videos. This drains the victims emotionally. This also affects the victims mentally. Sextortion sexually harasses, exploits, and assaults the victim. All these lead victims to depression, overthinking, and self-isolation from the family and society. They either fulfill the demands of the perpetrator or commit suicide.

It is seen that victims generally have the feeling that no one can understand what their emotions are. They worry about what others will think about them. They generally say that they can't trust anyone again (Hinduja,

2016). Victims must realize that it is not their fault and they didn't deserve this. There are people like their spouse, family, friends, etc. who they can trust. Victims might be facing a lot of different emotions but at the end of the day victims must remain positive as taking one's life is not a solution. They have the right to be treated with respect and dignity. They have the right to get help and be safe.

Steps that should be taken by the victims

It is important to stay safe and secure in the cyber world. It is advised that victims should not fulfill the demand of the perpetrators as demands and threats keep on increasing and victims find themselves in a vicious circle.

Steps that should be taken if a person is being extorted: (Cybertip, n.d.)

* Victims should be calm and rational.

* They should immediately stop all the communication from the perpetrator.

* They should never send money or additional sexual favors as demanded to the offender.

* Victims should inform someone about the threat such as spouse or parents.

* They should keep all the information they have about the perpetrator such as their user names of social media accounts, any images or documents sent by the offender, email address, or any such thing. They shouldn't delete anything sent by the perpetrator.

* Victims should report everything immediately to the nearby police station or cyber crime department.

* Victims should report immediately if the photo or video is posted online to the online content host (Humelnicu, 2017).

* Victims should be made to consult a counselor.

Steps to prevent online sextortion

Seeing how dreadful online sextortion is for a person, one should keep certain things in mind to prevent themselves from getting sextorted. In this digital era, one must know how much privacy they have while using their personal devices such as mobile phones, laptops, computers, etc. One can stop his/her spouse or family members from using their devices. But without one's awareness, their devices can be tracked, their information and data can be acquired by a third party easily (Fosdick, 2019). Therefore, the individuals must be cautious and take extra care while using their devices to avoid such cybercrime. Some preventive measures to avoid online sextortion are as follows: (Humelnicu, 2017; Legal Momentum, n.d.)

* One must not store their intimate, sexual private images or videos in their devices as devices are connected to either one's email account or cloud.

* One must not share their sexual and private images or videos with any other person on social networking accounts as these accounts can get easily hacked.

* One must cover webcams when indulging in some sexual activity while using a computer or laptops.

* One must use anti-virus software in their device.

* Don't interact with the person you personally don't know on social media.

* One must be careful while changing their clothes in trial rooms or hotel rooms and restrooms.

* One must reduce and eliminate internet addiction.

Steps parents should take to prevent their child from being sextorted: (FBI Pittsburg, 2016)

* Parents must provide sexual and digital education to their children.

- Parents must be frank with and understand their children.

- Parents must monitor the online activities of their children.

- Parents must teach their children not to friend with or talk to anyone on social media they do not know in real life.

Steps educators and policymakers should take to prevent online sextortion:

- Parents and students must be made aware of the terrible cybercrime of online sextortion.

- Education must be provided on how to use and protect their social networking accounts from being hacked.

- Education must be imparted to everyone about the laws prevalent in the country pertaining to online sextortion.

- Cybercrime department should publish specific data and brochures on online sextortion.

Laws on online sextortion

At least 26 states in the USA have legislation on Sextortion (Greenberg, 2019). Federal state in the USA has also introduced 'the SHIELD Act' i.e. 'Stopping Harmful Image Exploitation and limiting Distribution Act, 2019' in the House of Senate to tackle the harmful issue of sextortion in the state. It proposes to criminalize knowingly distribution of intimate images, threatening to distribute the intimate images of a person in public. Offenders will be convicted for a term of up to 5 years and fine (Speier, 2019).

If the victim in India files a complaint of online sextortion then it will be treated under the Indian Penal Code, IT Act, or POCSO Act. No law in India defines or criminalizes online sextortion. Only the state of J&K in its Ranbir Penal Code (which is no more in existence) had included 'sextortion' as a crime under Sec 354E to prevent people from exploiting subordinates sexually (AK., A. 2020).

Indian Penal Code (IPC), 1860

- IPC, 1860 provides for the law of extortion under Sec 383 and Sec 384 which says that *"threat or fear used in order of delivery of material thing by the victim to the offender"* is punishable with the imprisonment for a term extending to three years or fine.

- *"Assault or use of criminal force to a woman with the intent to outrage her modesty"* is punishable with the conviction for 2 years term under Sec 354 of IPC.

- Sec 354C of IPC, 1860 says that if the perpetrator infringes the privacy of a person and disseminated his/ her private images then such perpetrator will be liable of conviction for a minimum period of 1 year which may extend to 3 years.

- Sec 292 of IPC, 1860 punishes the offender who sells or distributes obscene book, paper, or figure conviction for a term which may extend up to 5 years and fine.

IT Act, 2000

- Under Sec 66E of IT Act, a person can be convicted for the term of 3 years or fine up to 2 lakhs or both if he intentionally captures, transmits, or publishes the private image of a person in the public without his consent.

- Sec 67A of IT Act, 2000 punishes a person for the conviction for the term of 5 years and fine up to Rs. 10 lakh if that person publishes or transmits material which contains sexual implicit act electronically.

- Sec 67B of IT Act, 2000 punishes a person for the imprisonment of 5 years term if that person publishes or transmits material which contains sexual implicit act by children electronically.

POCSO Act, 2012

Under this act, a person who commits sexual harassment on a child is punished with the conviction for a term which may extend to 3 years. Sexual harassment includes making a child show or exhibits his body or a part of his body, threatening a child to release his real or fabricated sexually explicit images using electronic means.

It is recommended that policymakers make a separate law regarding online sextortion because present laws do not fulfill the elements of online sextortion. Online sextortion involves a threat to release sexual images of the victim. It damages and destroys the dignity of the victim. It forces victims to perform sexual favors for the perpetrator. It assaults victims sexually and mentally to the extent that sometimes victims take their own life. It should also be remembered that the crime of online sextortion can take place from anywhere by anyone in the world. The perpetrator can be from a different country and of a different nationality. It requires investigation to track the perpetrator. It is also recommended that law should be made strict and severe keeping in mind that once an image or video is uploaded, it is hard to be removed from all over the internet. It can resurface anytime. Repercussions that victim has to face are unimaginable and unfathomable.

Conclusion

Everyone can use the internet easily but few are aware of cybercrimes such as online sextortion. Online sextortion cases are increasing day by day. Many cases go unreported due to the mindset of the people. It is high time that the educators, policymakers, professionals make people aware of the increase in cybercrime and the remedies available to them. Researchers, psychologists, psychiatrists, and concerned stakeholders can analyze the reasons for the commission of online sextortion by perpetrators. It is also emphasized that the government should make well-defined laws regarding the issue of online sextortion in the country. At last, everyone must understand that 'your safety is in your hand' and it is important to be responsible for own actions in this technology-driven world.

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Review Article
Cyber law for sexual crimes

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Abstract

Cyber-crime is a known entity since the introduction of the internet. Cyber sexual crime is a variant of this. Sexual crimes are always present in our society but the internet changed the nature of sexual crimes. It looks like there is a rise in sexual crimes over the internet. We can attribute to this the luxury of anonymity present over the internet. Indian Penal Code, 1860 did not have any section or chapter addressing cyber law. Information Technology Act, 2000 was a milestone in the Indian Jurisdiction System. It is a help for addressing, combating, and curbing cyber-crimes. IT Act is also helpful in creating awareness among the masses.

Introduction

Cyber-crime is an amalgamation of two words i.e. cyber and crime. In common parlance, the term cyber is taken to be something relating to the Internet or the virtual world. Whereas, the term crime is an action not permitted in law and which is a civil wrong. Cyber-crime is any crime that is committed over the internet. Easily, we can say that cyber-crime is illegal acts, where, the computer system is either a device or prey or maybe both.

Definition of cyber-crime

The Encyclopaedia Britannica defines cyber-crimes as *"Any crime that is committed through special knowledge or expert use of computer technology"*. Therefore, in cyber-crime different sorts of criminal offenses might be put together and acts with a reasonable conscience.

The Oxford Dictionary defines crime as *"An offense against an individual or the state which is punishable by Law"*.

The term 'cyber' was given by William Gibson in his 1984 fictional novel 'Neuromancer'. Cyber is used as a prefix to the worldwide field of electronic communication. (Giacomini & Zaidi, 2012).

Crime is an action that is punishable by law. The same can also be used for cybercrime.

The only aim of the cyber world is to suggest that computers are used to perpetrate an illegal act and to alert the users of protecting electronic proof, which is inherently fragile. This crime can, in short, be referred to as electronic crime. Crime is a legal wrong that may culminate in punishment. Cyber-crimes are committed against a person, society, or property. Examples of these crimes are cyberstalking, violation of privacy, pornography, defamation, e-mail spoofing, and hacking, etc.

Reasons of cyber-crime

There are various reasons for which people commit cyber-crimes. For example, in computers, data is stored in a very small space and the data or information can be easily obtained or removed by surely implanting programmed bomb or keyboard capturing devices that can steal access code, use of improved voice recorders, or retina images that can deceive biometric systems. The criminals take advantage of these loopholes and lacunas. Furthermore, negligence is also part of human conduct and criminals take advantage of this negligence. Criminals are also aware that the data are routinely destroyed and this affects the investigations of crimes (Giacomini & Zaidi, 2012). Moreover, cyber offenders prefer for this crime as it is less physical and more mental. Its nature as a white-collar crime attracts only persons qualified in this arena. Once data stored in cyberspace is breached, it ensures access to very huge and sensitive information at one single place of the virtual world. After stealing data, it is much much easier to transmit the same to the destination of choice. It also ensures hefty returns realizing the dream of getting rich overnight.

Ways of cyber sexual crime

1. Cyber bullying

The term cyberbullying also known as cyberstalking in documentations entails following a person's activities by way of the internet and sending messages (sometimes threatening in nature) to the target person or victim, unlawful entering the websites used by the victim or bombarding with messages or e-mails, etc even after his/her constant disinterest.

2. Cyber pornography

Cyber pornography includes pornographic websites, online pornographic magazines, uploading, downloading, and transmitting pornographic materials unlawfully. It also includes sharing with friends and sending them to another communication device. It also includes child pornography.

3. Defamation

Defamation is a false or fake rumor about a person. It can be committed by spoken words or in writing via communication devices like SMS, MMS, E-mail, etc. A false rumor gets viral through the internet may be counted as defamation. Defamation has been defined in Indian Penal Code (IPC), 1860 under section 499 as *"Whoever by words, either spoken or intended to be read or by sign or by visible representations makes or publishes any imputation concerning any person intending to harm, or knowing or having reason to believe that such imputation will harm, the reputation of such person, is said, except in the cases hereinafter excepted, to defame that person"* (Ranchhoddas & Thakore, 1997).

4. Criminal intimidation

It also has been defined under Indian Penal Code,1860 as *"Whoever threatens another with any injury to his person, reputation or property, or to the person or reputation of anyone in whom that person is interested, with intent to cause alarm to that person or to cause that person to do any act which he is not legally bound to do, or to omit to do any act which that person is legally entitled to do, as the means of avoiding the execution of such threat, commits criminal intimidation"* (Ranchhoddas & Thakore, 1997).

5. Obscene act in public

This involves exchanging or receiving pornographic items over the Internet, disregarding the dignity or modesty of a woman by attacking her and disregarding in public the modesty of a woman by word or deed, etc.

Present status of cyber-crime in India

According to the latest report of the National Crime Record Bureau (NCRB), total 21,796 cyber crime cases were recorded out of 50,07,044 cognoscible offenses in 2017 (Bhaskar, 2019). As per NCRB, during 2017, 56.0% of cyber-crime cases registered were for the motive of fraud (12,213 out of 21,796 cases) followed by 1,460 cases for sexual exploitation (6.7%) and 1,002 cases for causing disrepute (4.6%) (Bhaskar, 2019).

Cyber law

The IT Act (Information Technology Act), 2000 is the only federal legislation that provides legal recognition to computers and their liability issues. '*Actus reus and men's rea',* i.e. illegal act and wrongful intention, must be enforced to remedy criminal liability. Misdeeds alone are not enough for punishment because there is a mandatory limit of punishment. '*Actus non facit reum nisi mens sit rea',* i.e. if an act is done in a blameworthy manner then only it could be considered a crime. The Information and Technology Act, 2000 for the very first time brings cyber-crimes, punishment, and course of action for providing it within a legal frame. It is said that '*People are fragile so the law is important to protect them'.* And so also there must be laws to safeguard computers against cyber-crime.

Table-1. Classification of cyber-crimes

Crime Against Individual	Crime Against Economy	Crime Against Society	Crime Against Nation

◆ Carding
◆ Cyberstalking
◆ Hacking
◆ Identity theft
◆ SMS Spoofing
◆ Cyber Obscenity
	◆ Computer fraud
	◆ Computer forgery & counterfeiting
	◆ Computer sabotage
	◆ Cracking
	◆ Cybersquatting
	◆ Economic espionage
	◆ Hacking
	◆ Intellectual property rights infringement
	◆ Malicious programs viz.
	   ○ Virus
	   ○ Worms
	   ○ Trojan horse
	   ○ Hoax
	◆ Phreaking
	◆ Salami attacks
	◆ Tax evasion
	◆ Theft of telecommunication services
	◆ Web-jacking
		◆ Cyber pornography
		◆ Child pornography
		◆ Racial & other hate speeches on blogs and other social networking sites
			◆ Cyber terrorism
			◆ Cyberwarfare
			◆ Damaging critical infrastructure

Table-2. Sexual crimes covered in the Indian Penal Code (IPC)

Offense	Section
Obscene act in a public area	Section 294
Scandalizing by an assault on a woman's modesty	Section 354
Scandalization by word or expression of a woman's modesty	Section 509
Sending a threatening message by E-Mail or SMS	Section 506
Sending defamatory messages by E-Mail or SMS	Section 499

Table-3. Sexual crimes covered under the Information Technology Act (IT), 2000

Offense	Section
To pass on obscene material in electronic form	Section 67
Pornography	Section 67-A and 67-B
Sending offensive messages	Section 66-A
Violation of privacy	Section 66-E
Cheating by personation	Section 66-D

Modus operandi in cyber sexual crimes

- Violation of privacy: capturing and publishing the images, pictures, and videos of individuals often without the knowledge and thereby causing humiliation and embarrassment. Normally females are victimized in this way by the posting of pictures with a hidden attachment of an unwanted and often harmful message. It sometimes also contains phone numbers to cause disturbance to the part of the victim.

- Obscenity and pornography: Uploading and transmitting obscene and salacious materials over the internet and causing escalation and further transmission. It also includes images and videos of children of such taste. Many national and international online sharing websites have provided a nurturing

Table-4. Sexual crime and their punishment under cyber law

Section	Offense	Punishment		Fine	Cognizable or Non-Cognizable	Bailable or Non Bailable	Court of Trial	Compoundable or Non-Compoundable
66-E	Violation of privacy	Imprisonment of three years and also likely to fine		Up to one lakh rupees	Cognizable (section 77-B)	Bailable (section 77-b)	Magistrate of first-class	Compoundable (section 77-a)
67	Publishing or electronically transmitting obscene materials	**In first conviction**			Cognizable	Bailable	Magistrate of first-class	Compoundable (section-77-a)
		With imprisonment of either for a term which may extend up to five years and with fine	Which potentially extend to ten lakh rupees					
		In the second or following conviction						
		Imprisonment of either for a term which may extend up to seven years and also with fine	Which potentially extend to ten lakh rupees					
67-a	Publishing or transmitting of material containing sexually explicit act etc.	**In first conviction**			Cognizable (section 77-b)	Non-bailable	Magistrate of first-class	Non-compoundable (section 77-a)
		Imprisonment of either for a term which may extend up to five years	Potentially extend to ten lakh rupees					
		In the second or following conviction						
		Imprisonment of either for a term which may extend up to seven years	Potentially extend to ten lakh rupees					
67-b	To publish or transmit materials related to children in a pornographic manner	**In first conviction**			Cognizable conviction (section 77-b)	Non-bailable (section 77-b)	First-class magistrate	Non-compoundable
		Imprisonment of either description for a term which may extend to five years	May extend to ten lakh rupees					
		In the second or following						
		Imprisonment of either description for a term which may extend to seven years	May extend to ten lakh rupees					
72	Breach of confidentiality and privacy	Imprisonment for a term of two years		Up to one lakh rupees	Non-cognizable	Bailable	Magistrate	Compoundable

environment for creating, uploading, and transmitting such kind of materials including related to children. They make money by the propagation of such materials.

Blocking of these sites has been a challenge both in legal as well as technical means because the content can be uploaded in the different domain name or IP address and hosted in different IP addresses in different geographies. (Basha, 2010).

Jurisdiction of the court in cyber-crimes carried out outside India

There is a provision of Section 75 of Information Technology (IT) Act, 2000 which states that if an act constituting an offense involving a computer is committed by a person outside India, the court in India has jurisdiction to see the case. The computer or computer system must be located in India. In this case, the nationality of the person committing the offense is not pertinent and concerning the internet, there is no specific law regarding its jurisdiction.

Cyber laws related to sexual offenses- international glimpses

United Kingdom

- Obscene Publication Act, 1959
- Protection of Children Act, 1978
- Defamation Act, 1996
- Malicious Communication Act, 1998

USA

- Child Online Protection Act, 1998
- Protection of Children from Sexual Predators Act, 1998
- Spyware Control and Privacy Protection Act, 2000
- Children Internet Protection Act, 2000

Ireland

- Child Trafficking and Pornographic Act, 1998

How to combat and to keep a check on cyber-crime

The creation of a cybercrime investigation cell under the Central Investigation Bureau (CBI) was an important step in the right direction.

All cases of these crimes are to be decided by the court of law therefore, judges must be fully aware of the provisions of various laws regarding these crimes.

E-courts must be established in India. The IT Act should be given extensive publicity. And lastly, the police force is also must be trained for dealing with these crimes and they should be thought to be sensitive and cooperative with the general public.

Conclusion

In conclusion, it must be said that it is not easy and even possible to eradicate cyber-crime once and for all especially given the latest advanced scientific and technical developments. Nevertheless, it is always possible to combat or encounter this type of crime. To achieve that objective, the first and foremost requirement is adequate awareness among the general public about these types of crimes and also about its machinery. They must practice precautions to protect from the cyber-crimes and always be vigilant and watchful of their activities as well as others' activities over the internet.

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ReviewArticle

Psychoanalytic review of the trolling culture regarding female body

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Abstract

Internet trolls are people who use their anonymity to persistently, and many times with malafide intentions, promote and share things on some internet platforms, boards, and forums. With the advent of time, the trolling has become a medium for asking and doing sexual advances in the realm of the social media making the victim disgust be saying obscene comments or asking for nude pictures or by sending the nude pictures for any sexual advances from the victim in the form of the projection. The reaction to their action is the gate to redemption in their eyes. The certain kind of offline identities of anonymous individuals trolls is unknowable as are their true feelings. One can say that the feeling of guilt that is not being sublimated or used creatively may cause aggressive behavior towards the world outside. Anonymity increases the incidents of the trolling leading to the veracity of the attack more powerful. The internet is becoming a medium to invest our insecurities although it is a destructive practice.

Introduction

The world of the internet is full of knowledge that is available with just a snap of the fingers to us. The internet has made our lives easier and more comfortable in many ways. We are all now present in the universe of the internet. The personality of the internet has been changed with time. Once a lot of ideas about the free flow of knowledge and information were filled. There is the right to express yourself unfiltered, which in the real world does not exist. Many that enjoy this freedom online are known as trolls, the term used for searching and discovering victimizations first using an on-line fishing tool. Even those who call themselves trolls can only do a small proportion of the actual trolling. Trolls are portrayed as aberrational

and antithetic to how ordinary people talk. The definition of trolls quickly faded into the monsters hiding in the dark and threatening people. Internet trolls are people who use this anonymity to persistently, and many times with malafide intentions, promote and share stuff on some internet platforms, boards, and forums. Some take up the self-righteous role of 'setting things right', even with a negative turn of events. For example, people who post severely racist stuff, somehow, suggest that the reaction to that material helps - and not hurts - the race situation. The reaction to their action is the gate of redemption in their eyes. The relative age of the word, perhaps earlier in the early to mid-nineties - a lifetime in all internet years - was one cause of this misunderstanding. At the time the term 'trolling' first applied to disruptive or otherwise irritating online speech and behavior. Those trollers would avoid a particular discussion of non-sequitors, engage in so-called identity theft, or commit various crimes against language and logic.

Freud's initial work

Freud explains *"the notion of sorrow and lamentation as two separate reactions to the object 's loss. For Freud, pathological melancholy is unlike normal mourning, but it's a process in which there is a separation from an attachment object that has for some reason remained incomplete. The melancholic person channels his excess libido inward rather than disowning the libido invested with the lost object and concentrating on another object. As a result, a part or some part of the person identifies with the lost person, resulting in an inner division of self. There is an internalization of the loved object lost which forms in the psyche a separate entity that is tough, harsh, judgmental, angry, and yet attractive. While mourning is associated with the process of conscious thought which only happens in the person's unconscious psyche."* (Freud. S, 1917)

In trolling, one can try to look through the idea of absent-present as represented in the piece Mourning and Melancholia. It's about the loss, one observes that if something is absent, it can be psychologically present in our fantasy or one could say what is absent is hyper-present in certain spaces producing certain effects. Hence, the one who tends to troll online might be satisfying certain parts of their ego - it can be assumed as feeding one's ego and deriving some satisfaction out of that. Besides, one can think in terms of the masochistic parts of one's ego which are being satiated trough trolling and what uncanny ghostly effects it is producing for the one who is being trolled, as it can be triggering for certain people. One can also say that the feeling of guilt that is not being sublimated or used creatively may cause aggressive behavior on to the world outside as for their inward libidinal investment - in invested libido in the world of imagination. (Freud. S, 1917; Freud. S, 1940).

Transference, mirror and the ego

Also in the form of trolling can be seen as the matter of power dynamics that is explained by the French philosopher Jacques Lacan who tries to associate the imaginary with the restricted spheres of consciousness and self-awareness. It is to register with the closely linking to what people experience as the son-psychoanalytic quotidian reality. It mainly describes that who and what one 'imagines' the other person to be, and what one, therefore 'imagines' when they are communicating or interacting, who and what one 'imagines' oneself to be, including from the imagined perspectives of the others in terms of society. Such a description indicates how they portray the imaginary or unconscious core analytic ideas like transference, fantasy, and the ego. It symbolizes the dependence of the imaginary on the symbolic (Lacan, 1960). With such a description, it describes the dependency more towards the sensory-perceptual phenomenon such as images, emotions, and experience of one's body also affects the consciously lived emotions through

envisioning of thoughts and feelings of others, etc. which are shaped, stirred and overly determined by the sociolinguistic structures and dynamics.

Furthermore, one can see the online platform as a mirror where one can see oneself as present as well as absent. This screen as the online mirror represents the presence and also the absence at the very same time. And, this mirror reflects certain images that are false as well as having some partial truth in them. In other words, it is a mirror that has twofold functions - it reveals as well as conceals. In this light, one can see the trolling culture, how it prevails fear among the victims, and how trolling emerges out of the fear of one's self as to how Lacan's idea of the mirror stage goes. It can be seen through Lacan's mirror stage where the subject is constituted as a split or an alienated part of the self in the 'transformation that takes place in the subject when s/he assumes an image' to be himself or herself (Lacan, 2004; Fink, 2006). It is where Lacan locates the root of paranoia where the transition of the mirror stage is seen into 'paranoiac alienation' in which the reflective I becomes the social I; it can also be seen in contrast with Freud's model of a paranoid delusion of being watched by the external which Freud calls conscience coming from the parental criticism (as given in part-3 'On Narcissism'). The 'paranoiac alienation' leads to 'paranoiac knowledge' wherein the subject has a distorted relationship with reality and with the others. Since the subject's ego is displaced into the other, there is a perversion on the subject's cognition of the external. Besides, Lacan locates the root of psychosis in the eruption of symbolic into the real.

Power described as being anonymous

Anonymity allows people the freedom to do something they would not otherwise be doing, even saying things that sensible people usually don't say. And 'internet trolls' are people who use this anonymity to persistently promote and share stuff on some web platforms, boards, and forums, and many times with malafide intentions. Some take on the self-righteous role of 'setting things right' even with an event turn negative. For example, people who somehow post seriously racist stuff suggest that the reaction to that material helps the race situation - and does not hurt it. The reaction to their behavior is in their eyes the path to salvation. The social distance linked to the internet provides individuals with a particular form of atmosphere that could promote projection and assault by reducing the consequential input from the head-on. Anonymity increases the intensity and veracity of the assault by making the distance between the attacker and the offending victim greater. There is a subject at the pole of power, in which the co-constituency is assumed. Power is a response, it's a see-saw, and it can change. Relationships between the roles of subjects aren't just between subjects. Power changes hands and transforms. To be dominated by external force is a unfamiliar and terrifying process. The subject is produced through prevention, then the subject is created by a situation from which it is isolated and differentiated by definition. Desire will try to unravel the subject but will be shattered by the very subject in whose name it works. The topic has to block its own will. In this model, a subject turned against itself (its wish) emerges to be a state of the subject's tenacity (Kakar, 2001).

Subjectivity denies no type of identity but then is based on power to type itself, on the fact that it is difficult to learn without dependence, and the attitude of an adult is precisely to reject it and repeat it. 'Subject' is often referred to as 'the person' or 'the person' interchangeable. The genealogy of the subject as a crucial category does, however, suggest that this topic should not be directly associated with the person but should be associated as a linguistic category, a placeholder, and a structural knowledge.

Individuals come to inhabit the subject's domain (the topic appears as a 'place' at the same time), and they just appreciate intelligibility to the degree that, they are first established in the language, as it were. The linguistic stage of its life has been subjected or is going through 'subjectivation'. It makes no sense to regard 'the individual' as an intelligible reference to individuals or their becoming without a prior reference to their position as a subject (Foucault, M.1985). Subjection, a power exerted on a subject, is still a power assumed by the subject, a presumption that constitutes the instrument of the becoming of that subject. The subject reiterates its subjection (a notion shared by both psychoanalysis and Foucaudian accounts) to the act of opposing subordination. The power which initiates the subject does not remain constant with the power which is the agent of the subject. A significant and potentially enabling reversal occurs when power shifts from its status as of the condition of the agency to the subjects 'own' agency (constituting an appearance of power in which the subject appears as the condition of its 'own' power).

Authority works on the subjects in at least two ways:- firstly as what makes the subject possible, the state of its potential and its formative ability, and secondly as what is picked up and repeated in the 'personal' acting of the subject. As a subject of power, the subject overshadows its emergent condition, it overshadows power with power. The situation not only makes the subject possible but also factors into the development of the subject. Power goes across people and passes across person to person. Even if the subject is gone they are still under the gaze or watched or in the spell. They become the docile object of control. For example, for a widow absence of a subject gives an overpowering impact but when the subject is present there is a field of negotiation. The omnipresence of God makes us believe in an invisible power that we

fear in the absence of the subject. If God would have been present, there would be a limited source of exercise of power. The subject can be omnipresent in his absence and an absence of over presence that will create fear and anxiety. Power is not a thing but a relation, ways that the subjects are positioned. The fear is a situation in which one pole is absent and exercising upon you. This psyche is born with the subject absence position. Melancholia is the hyperextension of the subject's absence. We think of a state but actually, we are thinking of a thing (Foucault, 1985).

The subject takes on itself, and its subjection creates a subject and is a precondition of an entity, so subjection is the account on which a subject is the guarantor of its resistance and opposition. Whether power is conceived as preceding the subject or as its instrumental effect, the vacillation between the two temporal modalities of power ('before' and 'after' the subject) has marked most of the debate about the subject and the agency issue. Like other French thinkers of his time such as Louis Althusser, Foucault rejects the humanist notion of a free and fair subject for a view of it as decided by a structure of power relations. The foundation of Foucault 's view in 'The Subject and Control' is the belief that control is not exercised through coercion but through 'individuals' manufacturing. Foucault notices the double sense of 'subject', which is subjected to both a self-conscious subject of something and something which is regulated. Both of these definitions interweave in Foucault 's way of examining the relationship between subject and control.

Foucault begins his description of power as transforming the subject into an object, an object of knowledge, language, and power mediated through it and creating subjects. He describes three ways of objecting which make individuals subjects. The first way is inquiry modes that aspire to the status of

science that produces 'objective' knowledge about the subject, thereby objectivating life itself (Kritzman, 1996). Foucault's second form of objectification defines it as having to do with separation and differentiation, such as those made between madness and sane, criminals and law-abiding people (the notions given in his 'Discipline and Punish' or 'Madness and Civilisation'). The third form of objectification has to do with how individuals become objects by linking themselves with broader systems in relationships, such as sexual preference (discussed in the 'Origin of Sexuality' by Foucault).

Next, Foucault turns his attention to the essence of control that he believes is exerted by control relationships to make use of acts to alter others' actions. Therefore, power only exists when putting into action and is not a function of, or dependent on, consent; although consent may be granted. Power then does not act directly on another; it acts to take action which affects others' actions. Power isn't aggression, but it can be combined with abuse. There are two essential elements required to articulate a power relationship; the 'other' is always maintained as an acting person and as potential actions an endless number of options are available. Therefore, the exercise of power involves direction from the actions of another, and this is achieved through 'law' as a means of structuring the possible option of actions of the governed; a way of structuring the possibilities open to a subject. In the interplay between acts directed by the government, we see that there has to be an essential factor, and that factor is independence. Power can only be exercised over a free subject, and only in so far as it is free.

Sexuality in the times of social media

Since the advent of social media, the trolling has become a medium for asking and doing sexual advances in the realm of the social media making the victim disgust be saying obscene comments or asking for nude pictures or by sending the nude pictures for any sexual advances from the victim in the form of the projection.

The societal hierarchy and the media representation of women neatly effect that we see the female body as an introjection or the subject of desire for fulfilling the repressed thoughts. Our mood and discussion modes also play a vital role in sadistically trolling a female over the internet. Trolls project their anxieties on to the other person (female) as an entity of desire but also a means of catharsis.

Being invisible or anonymous gives us the leverage to give our ideas a framework that we can say anything due to our freedom and no one is keeping a watch over our actions.

The troller abuses his victim verbally and mentally. He infiltrates her defenses, shatters her trust in herself, confuses her and confounds her, demeans and debases her. He invades her territory, abuses her confidence, exhausts her resources, hurts her loved ones, threatens her stability and security, enmeshes her in his paranoid state of mind, scares her out of her wits, prevents satisfaction and causes frustration, humiliates and insults her in private and in public, points out her shortcomings, criticizes her profusely and in a man of 'scientific and objective'. Very often the sadistic acts of the troller disguise themselves as an enlightened interest in his victim's welfare. He plays the psychiatrist (totally dreamt up by him) to her psychopathology. He acts the guru, the figure of the avuncular or father, the teacher, the only true friend, the old, the experienced. All this to weaken her defenses and put her disintegrating nerves under siege (Freud, 1940).

Online trolling from a sexual abuser (the victim being trolled sexually) would be highly traumatic for her who then later infuses extreme paranoia and insecurities in her psyche. This trauma is likely to manifest in

certain situations where she has great difficulty with relationships or object relations as there has been a distortion in the previous patterns of her object relations.

As Freud says, what man fears is his libido. In this context, one can see how the victim's paranoia may block his libido to be invested in any object outside her inner world. Consequently, it might make a person delusional as well for the libido is only being invested in her imaginary world from where it returns to self, and can cause delusions (Freud, 1914).

A study published in NIMHANS revealed a pattern behind trolling through which any ordinary person can act like a troll. It revealed that both negative mood and seeing other troll posts by others significantly increase trolling behavior. It shows a fun element attached to trolling. It is like a group of men going on a hunting expedition. In the modern world, they do so on social media and their prey is women. Women who do not fit into the social norms of meek and passive are trolled the most. Men exercise their aggressive instinct to defend their world seeing women doing great in professional arenas while these men sitting at home probably unemployed. It pricks their male ego which they avenge by trolling these women. Social media creates the possibility for their baser instincts to get manifested with lowering of defenses or without fear of punishment. The cyber laws are not being very strictly implemented until now to create a sense of deterrence in their minds. A rape threat to a woman on social media has become the norm. The reason behind this is also due to the degrading of the language of public discourse in general whether on social media or mainstream media. Even celebrity personalities do not refrain from writing an appealing post whose hate is either directed at another community or gender. Communal hatred gets displaced towards the other woman. It leads to the use of sexualized and disgusting language while confronted with the other women. There is a relation between the non-productivity of men in the real world and their rage-filled attack on women in the virtual world. The virtual world becomes the space for venting out their frustration and rage without having to confront the other who is absent-present. So it is more convenient to abuse them sexually or otherwise without actually realizing the effect of their words and actions on their victims. For a narcissistic person, the other does not get born. Similarly, social media feeds into their narcissistic self by making the other only partially present. The rest of the work is done by a projection of the hateful parts in oneself for the other community or gender, which makes it legitimate in the mind of the abuser or troll, they are convinced that what they are doing is right.

The French feminist Luce Irigaray in her essay 'When the Goods Get Together', discusses how women have conventionally been treated as goods exchanged between men. Hence, it offends the male ego when they see liberal and emancipated women exercising their agency and registering their desires. When women desire, it is the man who becomes the subject of their gaze. As Laura Mulvey, the British feminist film critic, discusses in her essay 'Visual Pleasure and Narrative Cinema', that cinema has always been made from the perspective of male spectator putting him in a masculine subject position while putting the woman as the object of attention on the screen and the 'male stare'. Mulvey indicates two distinct forms of male voyeuristic gaze (i.e. seeing a woman as a picture 'to be stared at') and fetishistic (i.e. seeing a woman as a replacement for the underlying psychoanalytic fear of castration 'the lack') In the virtual world, which is akin to cinematic world, when these men, who have been bred on such phallocentric representations, see women taking an active role and becoming the subject of their desires, this creates a

sense of castration anxiety in male's psyche which is displaced in form of rage and hatred which gets unleashed on the social media when they see other men also accompanying them by sharing similar posts and similar emotions, their fear is diminished.

Conclusion

Hence, the one who tends to troll online might be satisfying certain parts of one's ego - it can be assumed as feeding one's ego and deriving some satisfaction out of that. Besides, one can think in terms of the masochistic parts of one's ego which are being satiated trough trolling and what uncanny ghostly effects it is producing for the one who is being trolled as it can be triggering for certain people. Furthermore, one can see the online platform as a mirror where one can see oneself as present as well as absent. This screen as the online mirror represents the presence and also the absence at the very same time. And this mirror reflects certain images that are false as well as having some partial truth in them. In other words, it is a mirror that has two-fold functions - it reveals as well as conceals. In this light, one can see the trolling culture in how it prevails fear among the victims and how trolling emerges out of the fear of one's self.

The exercise of power, requires the guidance of another's actions and this is done through 'government' as a means to structure the available choice of actions of the governed; a way to give structure to the possibilities available to a subject. In the interplay between actions upon actions guided through government, we see that an important element must be present, and that element is freedom. Hence, what we need is to change their perspective vis-à-vis women not just on social media but through the cinematic representation which was the foremost cause of such a perception to get created. Feminist and avant-garde cinema need to be produced which becomes a counter-discourse to their usual perception of hero bullying a heroine who first denies and then accepts his advances. This perception that the 'no' of women is only a meek gesture of saying yes later if a man tries harder needs to be changed.

The need of the hour is to look at various conditions or the socio-cultural influences that create such a tradition of trolling. The internet is becoming a medium to invest our anxieties and not thinking about the repercussions of trolling and affecting the victims mentally and incite a sense of guilt and shame within them, and it can be stated that the purpose of trollers has been fulfilled.

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Review Article

Female sexual dysfunctionand digital era: To listen to voice of a female

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Abstract

Sexual function is a complex process involving interaction between neural system, vascular system, endocrinological and psychological system. Sexual dysfunction has it's separate position in the classificatory system like DSM 5, showing increasing importance. Although studies are less showing the incidence and prevalence of sexual dysfunction in females, it can be stated that in females it is 43% as compared to males (31%). Among the various types of sexual dysfunction most common type is low sexual interest (26%). Less than one-third of females seek medical attention for their sexual problems. Since the use of digital technology is increasing now, it impacts on sexual life is of great concern. Studies show that it has various negative impacts where as some studies also show some positive impacts. Adequate knowledge about sexual function and dysfunction is essential for managing this unreached area. The use of digital technology can be of much help in not only providing education to the patient but also help in managing some aspects of female sexual dysfunction.

Introduction

Human sexual function is not only essential for reproduction but also important to have a

good quality of life. A complex and coordinated neurovascular process along with the adequate functioning of the vascular and endocrine system is essential for sexuality. However, psychological factors, a person's upbringing, interpersonal relations, family, and religious beliefs, also have a strong impact on sexual life (Althof, S. E., & Needle, R. B. (2013). Among other risk factors, age, education, experience (sexual), and poor health status also cannot be neglected.

Sexual dysfunction can result from a breach in any of the above factors. Female sexual dysfunction (FSD) is a progressive and extremely prevalent condition, commonly presented as symptoms like reduced vaginal lubrication, dyspareunia, low arousal, and difficulty in achieving orgasm. World Health Organization (WHO) defines female sexual dysfunction as 'the various ways in which a woman is unable to participate in a sexual relationship as she would wish'(NIH Consensus Development Panel on Impotence. 1993). A descriptive definition of FSD includes the persistent/recurring decrease in sexual desire or arousal, the difficulty/inability to achieve an orgasm, and/or the feeling of pain during sexual intercourse diminished vaginal lubrication, decreased sense of arousal and difficulty in achieving orgasm (Salonia et al., 2004)

In 1998 in the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders (DSM) the diagnosis of female sexual dysfunction was introduced for the first time. However, DMS-IV categorizes sexual dysfunctions according to the disruption in the phases of the sexual response cycle such as Hypoactive Sexual Desire Disorder, Sexual Aversion Disorder, Sexual Arousal Disorder, Orgasmic Disorder and Sexual Pain Disorders like vaginismus, dyspareunia. (American Psychiatric Association. 2000). Whereas DSM (American Psychiatry Association, 2013)has given more importance to Sexual Dysfunctions and Gender Dysphoria has been separated which was included in DSM IV-TR as Sexual and Gender Identity Disorders. DSM 5 recognized three types of female sexual dysfunction, Female Sexual Interest/Arousal Disorder, Female Orgasmic Disorder, and Genito-pelvic pain/Penetration Disorder with the deletion of Sexual Aversion Disorder (American Psychiatry Association, 2013). International Classification of Diseases ICD 10 classifies sexual dysfunction the same as DSM IV-TR recognizing all the five types(World Health Organization, 1992). As compared to male sexual dysfunction, which is extensively studied, female sexual dysfunction (FSD) is significantly less understood and is more complex (Allahdadi et al., 2009).

Epidemiology of female sexual dysfunction

After a thorough literature search in Pub Med, Google Scholar, and Scopus, we could find limited literature on the incidence and prevalence of most aspects of female sexual dysfunction. However, a study by Frank et al in 1978, which was done around 40 years ago found that 76% of females at that time experienced some indications of sexual dysfunction whereas 40% of males complain of erectile dysfunction (Smith et al., 2012). The consensus statement by the 4th international consultation on sexual medicine in 2016 on their review found that the incidence of sexual dysfunction in females 36% (Wetlesen, 1996) to 40% (Fugl-Meyer, 2002; Martin et al., 2014), whereas in males the incidence is around 31% (Laumann et al., 1999). The most common types of sexual dysfunction in females being low sexual interest (26%), followed by delayed orgasm (11%), vaginal dryness (9%), and dyspareunia being 5%. Whereas, in a study by Laumann et al 1999 and the data from the US National Health and Social life survey it was found that43% of females suffer from sexual dysfunction compared to males, where the percentage is around 31% (Laumann, 1999). Despite the differences in various studies, such as the difference in the use of the method, unavailability of proper definition it can be reasonably stated that the prevalence of females reporting at least one symptom of sexual dysfunction is approximately 40% to 50%, irrespective of age. Females sexual dysfunction has an overlap of presentation among various types

of dysfunctions as compared to male sexual dysfunction, where the dysfunctions are usually in one or two discrete areas (Mc Cabe, et al. 2016). Looking into these figures it can be concluded that sexual dysfunction in females is more prevalent than that of males. Sexual dysfunction can lead to impaired quality of life. In a study by Balon et al, the burden of sexual dysfunction is poorly identified and underappreciated. Male sexual dysfunctions, like ED and PME, cause significant financial burden and loss of daily work and also lead to a definite psychological burden. However only one study by Goldmeier et al, 2004, which was assessing the burden of female sexual dysfunction, addressed the only financial burden of female sexual dysfunction with a lack of data regarding, quality of life and psychological burden (Balon, 2017).

Causes of female sexual dysfunction

In a recent systematic review by Travera et al in 2020, including 67 studies, it was observed that there is a significant association of cognitive processing factors and various sexual dysfunctions in both males and females. The main cognitive factors identified are a cognitive distraction and attentional focus, automatic thoughts and sexual cognitions, causal attributions to negative sexual events, efficacy expectations, and perceived performance demands (Tavares, et al. 2020). Sexual self-concept affecting a person's attitude towards sex is affected by biological also psychological and social factors. The personality of a female, body image, sexual abuse in childhood, the small size of secondary sexual characters, and thereby inhibition from exposure, are among the other psychological factors. Among the social factors is the role of parents and brought up, peer group and media are much significant (Potki et al., 2017). Endometriosis can lead to sexual dysfunction in females with risk factors like higher rates of anxiety, depression, poor quality of sleep, pelvic pain, and dyspareunia. The authors suggested the role of psychotherapy along with medical management in patients with endometriosis (Youseflu et al., 2020). Pregnancy, childbirth, perineal lacerations, postpartum depression, breast feeding can have an impact on female sexual dysfunction post-partum (Leeman & Rogers, 2012). Patients' age, creatinine level, low-density lipoprotein, and diastolic blood pressure can also influence sexual dysfunction. Chronic renal failure can also be the negative predictor of the Female Sexual Function Index (Nikoobakht et al., 2020).

Ongoing epidemiological studies in women suggest that age, hypertension, cigarette smoking, hypercholesterolemia, as well as pelvic surgeries, breast cancer, HIV Chronic hepatitis C, urinary incontinence, Neuro Bechet's disease (NBD) hurt sexuality in all but especially on arousal and vaginal lubrication are also associated with female sexual dysfunction (Kedde, 2013; Bell, 2006; Elshimi, 2014; Duralde, 2017; Hayriye Sorgun, 2020). Female sexual dysfunction is showed in 77.8% of women of Parkinson's disease treated with Deep Brain Stimulation of Sub Thalamic Nucleus (Pedro et al., 2020). Female sexual dysfunction affects 21-41% of women with beta-thalassemia minor worldwide (Keşkek et al., 2020). Endocrine disorders involving pituitary, thyroid, adrenal gland, gonads, metabolic disorders have a significant effect on female sexual dysfunction(Carosa et al., 2020). Sexual dysfunction occurs in 40%-60% of patients with major depressive disorder (MDD) due to either the condition itself and/or the antidepressant (Freeman et al., 2020). The level of sexual dysfunction in schizophrenia patients was found to be high and is correlated with different factors such as single, divorced, widowed, relapse, and poor quality of life. Almost all anti-epileptic drugs is associated with sexual dysfunction if females (Petersen et al., 2020).

Perceptions and cognitions about the female sexual dysfunction

As compared to men less than one-third of women seek medical attention for distressing sexual dysfunction (Shifren et al., 2009). The majority, among the one third, reach the primary care physicians or gynecologists. Another issue is the physician's hesitancy in asking patients about their sexual life. Probably, lots of factors play a role in this two-sided hesitation. The factors like transference, insufficient knowledge, fear of crossing the limits inhibit the patient from seeking help. Psychiatrists are being reluctant because of counter transference, improper training, fear of being accused of boundary violations, etc (Solursh et al., 2003). In one study, 73% of women did not ask about their issues because of embarrassment whereas, 15% thought of the reduction in sexual functioning to be normal and hence never asked (Humphery & Nazareth, 2001). Therefore, some common misperceptions prevailing among the physicians are, women usually do not want to been quired about their sexual problems, or else it's very difficult to treat sexual problems (Buster, 2013).

Moving to the digital era

In a study by Anand et al., in 2017, it was noticed that approximately 3.77 billion people in the world have access to the internet with their computers /smart phones. Data from international telecommunication union found that about 94% of young age people around 15–24 years has been found to use the internet in developed countries whereas around 67% use in developing countries Among those who use internet, social media users are around 71% which suggests that around 3 billion people will be using social media by the end of 2021.

Impact of digital technology on sexual life

Being involved in internet-based activities consumes lots of time and energy which in return affects various aspects of the life of an individual. The study by Alimoradi et al in 2019 involving 938 participants found that there occurs a reduction of intimacy and perceived social support among those who use social media. These in turn lead to the variation in the relationship of social media use and sexual function (31.1%) and sexual distress (45.6%). The role of social media use in causing sexual dysfunction can be direct or may be indirect. Musses et al., 2015 in their study showed that sexual compatibility and sexual satisfaction are negatively influenced by the online use of sexual activity with sexual content. The romance and satisfaction between partners in a relationship are negatively interfered with by the use of digital technology (Mc Daniel & Coy, 2014).

There occurs a bidirectional relationship between anxiety and sexual performance. The above study by Alimoradi et al 2019 found that depression and anxiety were significantly associated with female sexual dysfunction. Performance anxiety also might end up on internet use. The use of online sexual activities and other sexual content only affects the quality of sexual relationships if individuals (Zheng & Zheng, 2014). As sensation seeking is an important predictor of online sexual activities, there occurs a shift to virtual sexual activity (online) from the actual one. The tendency of getting new and exciting sexual experiences is also an important maintaining factor for these online activities. Increased use of online pornography reduces moral values and in turn causing violence against women and negatively impact sexual health (Lim et al., 2016). Anxiety increases even also watching nonviolent pornography particularly in adolescents who have lesser exposure and the online activities are accepted as real not virtual. Which in turn negatively affects the sexual behavior of a person, leading to unrealistic expectations and hence sexual dysfunction particularly in

adolescents. Among other alarms are the non-use of condoms in pornography, influences the body image, and the possibility of addiction (Rostad et al., 2019). Violent pornography use is significantly associated with attitudes supporting violence against women, is revealed by a meta-analysis of non experimental studies (Hald et al., 2010).

Positive impact of digital technology on sexual life

Sexual desire, attitude, and behavior were positively and significantly correlated with using online sexual materials. Sexual life can be happier and more acceptable by either or both partners by changing their attitude towards sex and reducing the uneasiness with the use of the internet (Weinberg, et al., 2010). Using pornography has increased openness in discussing sexual life. Some of Australian and Danish (McKee, 2007; Hald & Malamuth, 2008) studies found that there have been significantly more positive effects attributed to the use of pornography rather than negative effects. The areas showing improvement are overall sex life, being more comfortable than before the use of pornography and open-minded discussion about sex, and also being more attentive to each other's sexual pleasure. Likewise, in another study from the US with 245 students, it was shown that exploring new sexual behaviors and being a source of empowerment for the viewer, building confidence in the females was associated with viewing pornography.

Management of female sexual dysfunction

Because of the complexities of understanding of female sexual dysfunction and scarcity of literature, the innovative treatment options are also in the stage of development. Topical Alprostadil, a synthetic prostaglandin E1(PGE1) which acts on the cAMP levels and leads to smooth muscle relaxation and vasodilatation. Its role for penile erection is established but in clitoral stimulation, studies are underway. Likewise, the role of Bremelanoptide, a synthetic analog of MSH(Melanonocortin Stimulating Hormone) receptor MC3, MC4, intranasal testosterone, intravaginal dehydroepiandrosterone, PDE5 inhibitors, Apomorphine, Bupropion and Trazodone are not promising in case of female sexual dysfunction (Belkin et al. , 2015).

Psychotherapeutic techniques can be of much help considering the unavailability of pharmacological agents and the role of psychological and social factors in female sexual dysfunction. Many females get benefited by mere psychoeducation. The age-old PLISSIT method is of use till now for the treatment of sexual issues (Annon, 1976). Among other interventions, those are significantly beneficial are basic counseling, psychotherapeutic options for individual women focussing on body, pelvic floor, cognitive behavior therapy, couple therapy, couple communication training, psychodynamic couple therapy, and couple sex therapy, etc (Bitzer & Brandenburg, 2009).

Use of the internet in the management

Promising the role of psychotherapy in the management of female sexual dysfunction can be of benefit when a patient visits the doctor and the doctor has adequate knowledge about specific therapies. Considering the scarcity of resource persons, the use of digital technology can be sought at various levels. Internet use can be of use in the management of female sexual dysfunction like anxiety and depression.

The advantage of digital technology over the direct face to face contact is: 1. When an individual is worried about being judged, internet maintains the anonymity; 2. Results in an increase in the self-esteem of the individual as the patient becomes more active

and responsible and attributes the improvement to herself; 3. The coexistence of the doctor and the patient at a time and space is not required (Andersson & Titov, 2014). Internet interventions showed improvement in sexual function, increased sexually active individuals, and increased use of sexual aids, but with clinician guidance (Schover et al., 2020). Although internet-based psychotherapies can be assumed to be of great help studies are lacking supporting the role. Few studies in male ED and PME prove that internet-based sexual therapy are of significant help (Van Lankveld et al., 2009). It has been earlier stated that female's sexual satisfaction improves after watching porn, which can be used in psychoeducation. Various literature is in support of the use of internet-based psychoeducation in the early phase of psychoeducation for male and female sexuality, also at a later stage of treatment (e.g., in the case of female hypoactive sexual desire), or in couple therapy (Jannini, 2012; Hummel et al., 2018).

Since internet-based therapy is useful in reducing anxiety, sexual dysfunction coupled with anxiety can be benefitted from this therapy. Research by Hummel et al found that cognitive behavior therapy (CBT) focused on the internet dramatically increases sexual appetite, sexual anticipation, vaginal lubrication, sexual pain, sexual anxiety, and body image in 84 survivors of breast cancer. The positive effects of the intervention on the overall sexual functioning were not only immediate but held for a 3- and 9-months follow-up (Mc Cabe, 2001). Effectiveness of short-term CBT for female sexual dysfunction has been showing in a study by Mc Cade with 44.4% females showing complete improvement after the CBT program Van Lankveld et al., (2016) while conducting a study in 199 couples with sexual dysfunction also demonstrated the effectiveness of CBT. Brotto et al., (2008) found that three-session mindfulness-based psychoeducational

intervention in females with sexual desire problems and sexual arousal problems led to significant improvement in the Female Sexual Function Index (FSFI). In a study by Lisa M Jones et al including 39 female patients, the use of internet-based psychological therapy, they have structured a therapy named 'Revive' which included three well-validated treatments like communication skills training, sensate focus, and regular email contact with a therapist. It was observed that females with sexual dysfunction, those who completed 'Revive' showed significant improvement in communication, sexual intimacy, and emotional intimacy as compared to those who did not receive treatment (Jones & Mc Cabe, 2011).

Conclusion

Female sexual problems are least studied and the most neglected aspect as compared to male sexual dysfunction. The knowledge about female sexual dysfunction has come a long way and leads to a detailed and extensive understanding of female sexuality and female sexual disorders. There is still room for understanding the various socio-cultural aspects of women's sexual health issues as well as creating awareness among men and women regarding the same. Digital technology has some positive and negative impacts on sexual life. However, the positive aspect of digital technology can be used for psychoeducation and which in turn can reduce some burden of sexual dysfunction. We are still ignorant about the digital culture affecting female sexual dysfunction and there is so much to explore in this front. We can only hope that our quest for understanding the mystery of female sexuality continues for the benefit and advancement of humankind.

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Review Article

Millennium women: Sexual challenges in the digital era

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Abstract

Contemporary life is rapidly becoming digitalized. Technology has percolated all spheres of human existence, blurring the dichotomy between online and off-line. Social structures and discriminations already existing in everyday lives have also spilled online. Hate, abuse, misogyny has encroached online spaces aiming to demean, hurt, and humiliate women and are a serious threat to the right of free speech. In this article, we look at how digital platforms and paradoxically helpful in generating awareness and improving participation via social media with more and more women sharing their experiences via #Testimonials (# MeToo, #NotOkay, #raped never reported, etc) and survivor selfies that go viral and generate public outcry that mobilizes socio-cultural and socio-political changes that strives to decrease the age-old gender divide.

Introduction

Digital technologies including smartphones, social networking sites, video hosting sites, online multiplayer gaming, clouds/dropbox services, blogs, wearables with activity tracking, etc have dramatically changed contemporary lifestyle and communication (Powell, 2017; Lupton, 2014).

They have a profound impact on all spheres of human behavior and existence. It has

changed the ways we communicate, form relationships, and access information (Lupton, 2014).

The government of India recognizes the need to empower Indian citizens digitally and increase digital literacy, launched the 'Digital India' campaign in 2015 which aims to increase connectivity, participation, and improved access to public services.

Digital technologies provide new forms of social connectivity for constructing self-identities outside traditional institutions (family, work, or school), create personal space with definite boundaries as well as develop their social and professional lives to gain acceptance and recognition globally

(Oksman, 2004). Technology has become embedded in daily lives, permeating every nook and cranny increasingly blurring the dichotomies of online and offline (Jamaludin, 2011). The rapidly developing information and communication technology have brought significant economic, political, and social changes so much so that 'Life is Digital' is not a hyperbolic claim (Lupton, 2014).

Society and technology are shaped mutually by human behavior and interactions. Previously owing to the digital divide, poor access, and digital illiteracy, the internet was considered largely a masculine domain, developed for, and use by men (Levmore and Nussbaum,2010).Due to increased awareness, affordable smart phones and data-plans, women and other marginalized groups (LGBTQ, people with disabilities, etc) are increasingly using the 'Net' to share ideas, express opinions, and create niche online presence (Green et al, 2015). With the globalization of digital communication, abuse, and harassment too has become global (Henry and Powell, 2014; Powell, 2017; Bartlett et al, 2014). Women are disproportionately high recipients of these 'E-Bile' followed by people of alternate sexuality and few men (Jane, 2014).Ninety percent of the slanderous comments, real or doctored images, and porn video content showcases verbal or physical aggression against women (Mc Glynn, 2017).

Online sexual harassment

Sexual harassment is a well defined and familiar term. It is a form of sex discrimination involving unwanted/ unwelcome sexual advances, requests for sexual favor, and other conduct of verbal or physical nature that causes another person to feel offended, humiliated, fearful, or intimidated.

It comes online when it is perpetrated with the aid of digital technology like on internet sites, such as chat rooms, public forums, social media, and online dating sites, or through private communications via mobile phone or email, including verbal and/or written comments and requests, and/ or graphic images (Sethi & Ghatak, 2018).

Dimensions of Cyber Sexual Harassment (Powell, 2017) are identified as:

1. **Gender-based harassment:** It may be verbal, visual, and textual. These are unsolicited comments or abusive remarks and pile on threats directed at victims because of their gender invoking graphic imageries of rape, violence, and abuse to stimulate fear and other negative emotions. Women, mainly college-aged girls, are ridiculed online for their sexuality and objectified (Wajcman, 2000; Hardaker, 2016). Men receive the hate for their ideas and actions, the comments generally make fun of their perceived sexuality and diminish their manliness. Most LGBTQ people are attacked because of their sexuality doesn't conform to heterosexual society rules and they are accused of being sex offenders and sexually deviant. Sexual and Hate comments falsely accusing the victim of having STDs, mental illnesses, etc flood the message boards and blog (Hardaker, 2010).

2. **Unwanted sexual attention and experiences:** Perpetrators convey sexual messages by objectifying and reducing victims to be their sex organs (often described as diseased) existing solely for the pleasure of others (Hardacker, 2010). Inappropriate comments on intimate lives and subjects, unsolicited images and videosblatantly hinting sex-related activities either online or offline (Baumgartner et al, 2010; Sarkeesian, 2012).Using camera-enabled smart phones to take photographs and videos of unsuspecting victims to share online.

Victim's contact information, social security numbers, medical conditions, and their availability for sex are advertised online rendering them vulnerable to violence by strangers beside the perpetrators (doxxing) (Henry and Powell 2016; Eckert, 2020).

3. **Sexual coercion and sextortion:** Perpetrators pressurize victims to share nude photographs and videos then extort money with threats of sharing them with family and public, damaging reputation, employability, and increasingly exposed to sexual assault by strangers. Many people (mainly women) are victims of revenge porn by their rejected ex-partners. Fake online advertisement soliciting sex and lies about the victim's violent and masochistic sexual preferences populate the net created by often known people, ex-boyfriends, ex-husbands, coworkers, etc. Nude photos and videos, doctored images appear on dedicated porn sites in case of non cooperation (Englander, 2015; Powell 2017, 122). Several predators coerce and groom children online to produce child pornography (Beech et al, 2008).

4. **Cyberstalking:** Malicious stalkers are using sophisticated technologies to keep tabs on their victims, hacking into personal devices, cars, homes, and offices. Threatening anonymous emails and messages to victims and employers full of lies, accusing victims of misdeeds and offenses (Spitzberg, 2002; Borrajo et al, 2015; Craven et al, 2006; Fraser et al, 2010).

What is common in all is they seek to insult, humiliate, and silence victims and diminish their online participation (Powell and Henry 2016; Brody and Vangelisti, 2017). Despite the victim's efforts to remove from one site, these fester and return online like the head of Medusa in some other sites. The net provides longevity to the hate, as comments and abuse can be retrieved online long after the victim has curtailed and censored their online activities.

The proliferation of cyber sexual harassment

India has 560 million (January 2020) active internet users and has become the leading country with 260 million people using Face book, 34 million users on Twitter, and video sharing platform Tiktok was downloaded by 466 million Indians by November 2019. Almost 400 million Indian smartphone users are on Whats App or its local language counterpart (Tech Crunch, Reuters).

Statistics show that the numbers are still increasing, with more people connecting online. Higher educated people are using more internet. Men and women differ in their internet use (Bimber, 2000), with men voraciously consuming information and women gravitating towards communication. Men are more likely to use the internet for recreation and women are rapidly catching up (Statistics Research Department, 2020).

Due to the lack of digital literacy, many are unaware of their digital rights. For them, cyberspace is a disembodied and abstract virtual space that is very different from real lives, full of fun and games (Powell 2017; Benedickt 1991).

While this may be true in some cases, the internet has its own darker aspects. Sociologists argue that rigid gender roles and stereotypes experienced during face to face communications can be changed via digital means (Beck-Gernsheim, 2002; Cooper, Delmonico, & Burg, 2000) but physically existing and culturally sanctioned power structures, inequalities, and domination have spilled online.

Easy accessibility, freedom, anonymity, and lack of accountability has led to increased discrimination and sexism online (Lapidot-Lefler and Barak, 2012). Inappropriate behavior has become acceptable and

naturalized in the Wild West of the Internet (Franeck 2009). Unlike contact or place-based offenses, online abuse can be perpetrated by a person occupying a different time zone with miles of distance between them and the victims (Powell 2017).

Criminals, predators, stalkers also have become ubiquitous, lurking in innocuous online spaces, and targeting unsuspecting audience (Borrajo et at, 2015; Ybarra and Mitchell, 2008). This means the technology-facilitated sexual harms perpetrated by them are undeniably substantial. The prevalence of on-line hostility is on the rise, getting uglier and filthier with time and increasingly gendered. Internet trash talk, graphic threats of rape and violence, unsolicited requisitions and pornographic images, revenge porn videos and photographs have filled online platforms (Jane, 2014, 2015, 2016, 2017; Barak, 2015).

Online misogyny, rape culture, and revenge pornography

In her series of papers, Emma A. Jane states the 'online hyperbolic Vitriol' has become a normalized, commonsensical way to communicate online. It is commonly expected by anyone who is online voluntarily and voices opinions. Gender wars are at their peak. Hegemonic masculinity is threatened by the women occupying the supposedly male spaces (Ballard and Welch, 2017); Fox and Tang 2014). It has its roots in the age-old cultural tradition that women are inferior to men. Their ideas, needs, wishes are subject to the whims of men and their existence is limited to domestic spheres, and those who overstep need to be put back into appropriate places. Men have actively created several toxic online spaces where they ridicule, abuse, and humiliate women for participating in online activities and discussions (Banet Wieser and Miltner, 2016). Men infiltrate into online forums for only women or any neutral online forums and start posting immature and inappropriate comments which are described as 'Virtual Manspreading' (Jane,

2017; Stortz 2016). Rape apologists post graphic rape and death threats (Young, 2005; Young and Whitty, 2010).

As with rape, domestic violence, and workplace sexual harassment (Mc Donald, 2016), gendered cyber-harassment is frequently trivialized as not being a big deal, mocked and sheltered by stereotypes and rape myths. The responsibility is shifted to the victim, claiming that they were attention who resand asked for it, enjoyed it, and bought victimization upon herself (Loney Howes, 2015). It is widely believed that violence is committed only by sexually deviant men and women exaggerate or make up the claims to cover their indiscretions and misdeeds (Ging and Siapera, 2018). These myths absolve perpetrators because it was online, and they didn't mean to do any harm (Lonsway et al, 2008; Dodge, 2016). Many commentators gang up on the victim thus escalating the abuse (Palermo et al, 2019).

These activities are often under reported due to shame, lack of technical expertise, unresponsive law enforcement causing the victim to stew alone. According to Citron 2014, these offenses are usually legally intractable due to their personal and idiosyncratic nature (Citron and Franks, 2014; Citron, 2014).

Sexting defined as sending sexually explicit pictures, videos, or text messages electronically has become normative behavior as foreplay for future sexual activities (Dir et al, 2013; Drouin et al,2013; 2017; Mc Daniel, 2015; Klettke et al, 2014). While it's enjoyable consensually, it can quickly become ugly for people who assume or misperceive consent or interest in future face to face sexual interaction and can potentially lead to unwanted sexual experiences (Choi et al, 2016; Reyns et al, 2013). Sexting and sexual violence are closely related. Many women feel coerced to sext by partners who resort to manipulation and blackmail (revenge pornography) to exact

cooperation (Walker and Sleath 2017; Bartow, 2009). One study by Brodie found that participants of sexting (especially men) are more impulsive and more likely to endorse sexual violence (Brodie et al, 2019; Florimbio et al, 2019).

Psychological impacts of online hate

Human beings are vicariously used to enjoy violence and conflict in movies, television and simulated computer games, the net with their relative anonymity and impunity help users to exercise aggression online against real human beings. Vitriolic words and graphic threats have become a form of digital sadism (Sest and March, 2017) where incivility and crude remarks are a competitive game among perpetrators. They derive pleasure and gratification from the discomfort and distress of the victims (Megarry, 2014). Trollers relish the back-and-forth mockery and boast about their ability to create the most evocative venom, break taboos and elicit emotional responses from targets. This hate aims to exclude women from the production and consumption of tools, platforms, and services of digital infrastructure.

Constant remarks and threats cause the victims to experience long term emotional/ psychological trauma, symptoms of panic, anxiety, and depression, sexual problems, and attachment dysfunction primarily relationship anxiety and avoidance (Ross et al, 2019). Women report significantly low self-esteem and loss of self-confidence. For some the reactions from families and support groups based on the existing cultural myths, make it difficult to cope with the experience. There is also a constant fear of the safety of self and family (Lindsey et al, 2016).

Females facing subordination and exclusion online, tend to withdraw from online platforms or change the ways of online interaction often at the cost of their profession. This has been termed 'Economic Vandalism' by E. A. Jane (Jane 2018). Many women report restricting online post expressing opinions, using male pseudonyms, playing male characters in games, avoiding controversial forums, and engaging the trollers to diminish the hate speech. To decrease the digital gender divide, many schools and organizations now provide sexual harassment awareness training to their members. Research indicates that such training decreases the acceptance of rape myths.

Fighting 'Fire with Fire'

Digital technologies paradoxically also provide ways to combat abuse and hate by enabling vigilantism, activism, and justice (Trottier, 2019; Fileborn, 2014). Confidential and anonymous reporting of sexual assault has empowered victims to alert authorities and take action against their assaulters. Several victims of online sexual harassment are using the technology to publicly call out the perpetrators (DIY Justice Onlineor Digilantism), documenting evidence captured in their smart phones and sharing their experiences as searchable # testimonials with supportive online peer community, some are resorting to making public art, blogs and websites filled with images received by them over the years (Vitis and Gilmour, 2017). Social media sites have become a forum for hashtags activism where victims- survivors, activists, advocates, etc can discuss their experiences, challenge the prevalent mindset, debate, and reframe policies. With this # going viral with multiple sharing and likes, these are also a bridge to gain the attention of the mainstream media and political groups and pressurize necessary changes in policies and laws (Henry and Powell, 2016) for faster justice (Jane Dobson, 2016).

Cyber laws in India

It has become imperative to teach women especially young girls to identify acts of

sexual harry in their nascent stage and keep evidence via screen shots and printouts that can help investigators to trace perpetrators. It's the first instinct to ignore and delete the materials but these only encourage abusers (Sethi and Ghatak, 2018). Not reacting or responding to these seems to be the first response of the victims followed by blocking and reporting abuse in the sites that are obliged to disable them within 36hours under IT rules 2011. Cybercrimes have no jurisdiction as these crimes are committed without any barriers of boundaries. So, this can be reported in any city irrespective of where the crime was committed. Police cyber cells have been established especially for Internet-related criminal activities. For those who don't wish to approach police can lodge complaints at National Commission for Women, who take it up with the police and in case of serious offenses can set up and inquiry to probe the issues. The IT Amendment Act, 2008 has established a National nodal agency called Indian Computer Emergency Response Team (CERT-IN) responsible for computer security threats that have issued guidelines on procedures, prevention, reporting, and response to cyber sexual harassment and abuse incidents. Online grievance redressal can be done using emails, filling up incident reporting forms, telephones, fax, and letters addressed to the Ministry of Electronics and Information Technology.

Some of the cyber laws about sexual harassment under Indian Judiciary are:

1. Section 354A of the IPC: Under this law, people posting obscene comments on SNS are liable for punishment up to one-year imprisonment with/without fine. Unwelcome physical contact, explicit sexual overtures, showing pornography against the will and demanding sexual favors are punishable with imprisonment up to 3 years with or without fine.

2. Section 354C of the IPC: Punishment for voyeurism is described in this act with up to 3 years of imprisonment in case of the first offense and up to 7 years play in second offense. It especially describes private acts when unsuspecting women are watched, or their images/videos captured. It also includes the dissemination of consensual image to 3rd party (revenge porn). It is a criminal offense under both the IT act and IPC

3. Section 354D of the IPC: This section describes Stalking. Any man who follows a woman attempts interaction despite clear disinterest by a woman and monitors her activities via digital/electronic communications (except for detection /prevention of suspected criminal activities, reasonable under circumstances) is punishable up to three years and up to five years in subsequent offenses along with monetary fine.

4. Section 499 of the IPC: This section has provisions for Defamation. Any spoken or written word, signs, visual representation, the publication (obscene remarks, photos, or videos on social media) concerning any person that intends harm the public reputation of such person may be imprisoned for up to 2 years with or without fine or both.

5. Section 503 of the IPC: This section deals with criminal intimidation. Threats of injury to person, reputation, or property with the intent to cause alarm is punishable with a jail term of up to 2 years. Threats of grievous hurt are punishable for up to seven years.

6. Section 507 of the IPC: Any person committing the offense of criminal intimidation using anonymous communications is liable for punishment for upto two years.

7. Section 509 of the IPC: Any sexual words, sounds, gestures, exhibits (photos or videos) posted on SNS intruding upon privacy and modesty is punishable for up to 3 years with fine.

8. Section 66E and 67A of the IT Act: Publishing sexual images in print or digitally that violates the privacy of an individual is penalized with imprisonment up to 3 years and fine up to 2 lakhs under 66 E and seven years imprisonment and fines up to 10 lakhs in 67A

9. Section 67 of the IT Act: Publishing obscene material online.

10. Section 67B: Publishing Child pornography, Online Sexual Grooming of children is penalized with imprisonment from 5 to 7 years and fine up to 10 lakhs.

11. Section 292 of the IPC: Any book, paper, pamphlet, drawing, painting, or representation deemed lascivious and obscene digitally falls under this provision.

Conclusion

Online communities and social media have empowered victim-survivors, advocates, activists, etc, and enabled widespread support for feminist activism. Woman's testimonials have long served as a form of activism and justice-seeking but the online formats have enabled reclaiming several previously silent voices, increased participation, generate awareness about gender mis recognition, validation of their experiences from global network and vindication for their sufferings. These have been recognized socially and politically, necessitating measures for reporting and action against perpetrators (Powell and Henry, 2018). Laws have been modified to encompass the changing scenarios and people have been sensitized to this fundamental yet 'new' discrimination. Thus, this widespread uproar is mot merely Slacktivism (Rotman, 2011)but an all-powerful tool for activism and seeking both informal and formal justice (Powell and Henry, 2015)against the age-old gender wars, to bring forth significant sociocultural and sociopolitical changes in the modern times.

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Review Article

Transgender and gender non-conforming (TGNC) online dating experience

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Abstract

This paper reviews current literature regarding the online-experience of transgender and non-conforming (TGNC) individuals, focusing on the online dating experience. The paper will identify key themes that were developed by reviewing nine peer-reviewed articles. The themes that were identified and outlined in detail in this paper include self-presentation, cultural impacts, the presence of dominating masculinity, sexual health and risky sexual behaviors, trans-misrepresentation and sexualization, and online-based interventions. The paper then utilizes these themes and provides clinical recommendations for clinicians to refer to when working with the TGNC population. Lastly, this paper will identify the limitations of the current paper and address areas of future research.

Introduction

According to recent studies, there are approximately 1.4 million adults in the United States who identify as transgender (Scheuerman et al., 2018). Scheuerman et al. (2018) define the term transgender as *"a person whose gender identity is different from the one they were assigned at birth"* (p. 1). Some transgender individuals choose to socially

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transition and/or medically transition to be congruent with their gender identity (Hughto et al., 2015). However, other individuals may choose to have their gender identity "outside of the traditional gender binary", and consider themselves gender non-conforming [GNC] (Hughto et al., 2015). Therefore, the authors will utilize the term transgender and gender non-conforming (TGNC) throughout the article.

Research has stated that individuals belonging to the lesbian, gay, bisexual, transgender, queer/questioning, and more (LGBTQ+) community have lower odds of daily activities resulting in social encounters, which raise the importance for the usage of

online dating applications (Choi et al., 2017; Chan, 2016). With the increase in smart phones and technological availability, these dating apps have become a convenient method for sexual and gender minorities to meet and connect (Chan, 2016; Choi et., 2016; Duguay, 2017).

Several gay dating apps were referenced throughout the literature search; however, Grindr was the most mentioned. In 2009, Grindr launched intending to aim their app towards men-who-have-sex-with-men (MSM) by allowing users to access a location-based dating app (Lloyd & Finn, 2017). Duguay (2017) highlighted the success of Grindr, stating that approximately 1.5 million individuals utilize the application daily. Apps, such as Grindr, allow users to view profiles that are made up of chosen photographs, along with other personal information the user chooses to disclose (Chan, 2016). Users are then allowed to exchange messages, photos, and location information through the app (Chan, 2016).

Despite the overwhelming success of Grindr, the app recently underwent controversy due to *"alleged banning, deletion and censoring of trans users' profiles"* (Lloyd & Finn, 2017, p. 160). Due to the backlash, the app then responded by creating the option of 'Trans' that users can select as their self-identity, which has allegedly led to a higher increase of app usage by TGNC individuals (Lloyd & Finn, 2017).

Methods

This article reviewed current research regarding the online experience of TGNC individuals, specifically the online-dating experience, and provide recommendations to guide clinical work.

Authors utilized Google Scholar, APA PsychNet and Pub Medto locate recent

articles that were relevant to this topic, while utilizing keywords of transgender, gender non-binary, gender non-conforming, dating apps, LGBTQ+ online experience during the search. After reviewing nine articles, the authors reviewed specific themes, which they felt were important in discussing the current topic. These themes included self-presentation, cultural impacts, the presence of dominating masculinity, sexual health and risky sexual behaviors, trans-mis representation and sexualization, and online-based interventions.

Self-presentation

TGNC individuals have to negotiate ways in which they present themselves daily, which furthers the importance of understanding how this plays out technologically (Rodriguez et al., 2016). Recent studies have begun to consider profiles on dating apps as a form of self-presentation (Chan, 2016). Additionally, research has evaluated the level of self-presentation and the hesitation towards self-presentation of transgender individuals who use dating apps (Chan, 2016; Duguay, 2017; Lloyd & Finn, 2017; Rodriguez et al., 2016). Self-presentation is utilized by app users as a means to create impressions (Chan, 2016).

Several factors have been correlated to levels of self-presentation by app users. For instance, research has found that individuals from large cities are more likely to identify as LGBTQ+ community member or post pictures of their faces than those of smaller cities due to negative consequences that may be faced in small communities (Chan, 2016). Additionally, research has found that younger individuals, individuals with a higher body mass index, or individuals who did not formally state their race were more likely to include pictures that showed their faces on their profiles (Chan, 2016). Reportedly these

factors are all correlated with the level of 'attractiveness' throughout dating platforms (Chan, 2016).

Cultural impacts

In evaluating cultural impacts, Chan (2016) found that cultures play a role in TGNC user experience of dating apps. In comparing Chinese MSM to American MSM, Chan (2016) found that Chinese MSM was less likely to display their faces on dating apps as a means of protection due to the severity of stigma and in some cases illegality. On the other hand, Western culture considers displaying one's face on dating apps as essential as a form of self-identification, self-representation, and a display of honesty and authenticity (Chan, 2016).

In addition to showing their faces on the profiles, research has shown that cultural differences impact communication styles of users (Chan, 2016). With less social norms on individuals in Western culture, American MSM is more likely to be direct and verbalize romantic feelings on dating apps than those of Chinese MSM (Chan, 2016).

Presence of dominating masculinity

Dominating masculinity has appeared to be present in gay dating apps (Rodriguez et al., 2016), which may negatively impact the experience of TGNC users who may or may not present and/or identify with masculinity. Masculinity was displayed by presenting oneself as physically fit through topless photos (Chan, 2016). Rodriguez et al. (2016) inferred that inaccurate media representation of masculinity in the LGBTQ+ community impacts expectations of gender identity, which *"creates a society of over-sharing, superficiality, and instant gratification,"* with the need to constantly 'advertise yourself' (Rodriguez et al., 2016)

Sexual health and risky sexual behaviors

Several research studies have focused on the relationship between dating apps and sexual health and risky sexual behaviors (Choi et al., 2017; Kesten et al., 2019; Patel et al., 2016; Sun et al., 2018). Studies have implied that an increase in unprotected sex, a higher number of sexual partners, substance use before or during sexual intercourse, and both the testing and higher prevalence of sexually transmitted infections (STIs) are all associated with seeking sexual relationships online (Choi et al. 2017; Kesten et al., 2019). Kesten et al. (2019) reported that this correlation may be associated with the fact that the increase in social networks creates for changing partners more quickly and a greater mixing of partners. Additional risky sexual behaviors that have been noted included utilizing social media sites to seek sexual partners in exchange for drugs and clothing (Patel et al., 2016).

Trans-misrepresentation and sexualization

TGNC individuals face misrepresentation, stigma, and violence (Lloyd & Finn, 2017). Additionally, they are subjected to sexualization, which furthers the senses of misrepresentation and discrimination (Lloyd & Finn, 2017). TGNC women experience sexualization through the inaccurate idea of seduction, hypersexuality, and fetishism (Lloyd & Finn, 2017). Trans-misrepresentation can also be demonstrated through the association of trans women with cross-dressers and being displayed as sexually suggestive (Lloyd & Finn, 2017).

Participants in a study conducted by Lloyd & Finn (2017) expressed experiencing misrepresentation through Grindr as Grindr users assume that the app is exclusively for MSM. The false idea of app users adds to the misrepresentation that trans users are gay

men, drag queens, cross-dressers, and/or feminine men (Lloyd & Finn, 2017). Trans women thus felt it essential to display their gender transitions and feminine qualities to be viewed as authentic as a means of acceptance (Lloyd & Finn, 2017).

Participants in Llyod and Finn's (2017) study also verbalized experiencing sexualization during their use of Grindr. Sexualization was experienced through the assumption that trans women on the app were *"kinky, perverted and immoral subjects"* known for bringing 'shame' upon others unless kept secret, which reinforces that idea that their sexuality as a whole must be kept a secret (Lloyd & Finn, 2017).

Online-based interventions

As previously mentioned, studies have implied that there is a higher risk of developing STIs as a result of using online dating apps to seek relationships (Choi et al., 2017; Kesten et al., 2019; Patel et al., 2016; Sun et al., 2018). Yet notably, this population is also less likely to be reached by recent interventions aimed toward prevention (Patel et al., 2016). Online interventions have been considered inexpensive, effective, and easily accessible (Choi et al., 2016; Kesten et al., 2019). While inquiring about the usage of social media and dating apps for providing sexual health information, Kestenet al., (2019) found that using this platform was acceptable and viewed as positive.

In addition to utilizing online-based interventions with sexual health, Lloyd and Finn (2017) have also found benefits in online-interventions that provide a safe space and the ability for the TGNC individuals to have a voice and experience social liberation. According to research, technology has provided the opportunity for trans users to comprehend their identities, create interpersonal relationships, having

emotional support, create a sense of universality, and provide the availability to activism (Lloyd & Finn, 2017).

Clinical usage

The following paragraphs will provide basic clinical guidance for therapists to address the domains identified in the existing literature. All clinical work with TGNC individuals can consider the tenets of affirmative therapy. A comprehensive review of TGNC affirmative therapy exceeds the scope of this article. However, there are resources available to clinicians that would like to review the practice of TGNC affirmative therapy. American Psychological Association (2013) provides a number of resources including fact sheets, a trans resource guide, policies and practices for working with trans individuals, 2015 U.S. Transgender Survey Report, and many other useful resources.

A comprehensive review of TGNC affirmative therapy can be found in a chapter by Singh & Dickey (2017). This chapter is part of a comprehensive text on working with sexual orientation and gender diversity. The authors of this chapter discuss language, theoretical frameworks and competencies, the history of working with TGNC individuals, individual and group counseling, working across the life span, and ethnical and advocacy issues. This text may serve as an introduction to the general counseling skill and information necessary to provide an affirmative practice.

Self-presentation

As previously mentioned, TGNC individuals are negotiating their self-presentation daily, both in real-time and through dating apps (Rodriguez et al., 2016). Clinicians should utilize this idea of self-presentation to engage the client in conversations regarding how they present themselves, along with how

they want to be presented in the world. Further, clinicians can provide psycho-education on authenticity and encourage the individual to reflect on how they are being authentic, both in the world and to themselves. In doing so, clinicians may be able to assist the individual in understanding how the client is managing themselves and coping with this idea of self-presentation. Though these conversations may require confrontation which may be difficult for the individual, they may also assist the client in understanding who they want to be and reaching that level of peace within oneself. Clinicians may want to assess any risks associated with an authentic presentation. This will allow for an informed decision to be made by the client that considers both authenticity and safety.

Cultural impacts

In discussing cultural impacts, there are several considerations that clinicians should have. Clinicians should alter their treatment to meet the client's needs through a culturally relevant approach (Asnaani & Hofmann, 2012). If there is unfamiliarity with the culture, it is the clinician's responsibility to familiarize oneself with that culture both currently and historically to properly assess how this can impact the client (Asnaani & Hofmann, 2012). By having an awareness of the systematic history of the client, the clinician can have a deeper understanding of the events of the client's life (Asnaani & Hofmann, 2012). Clinicians, even those who feel as though they have a deep understanding of multicultural awareness, must treat each client uniquely (Asnaani & Hofmann, 2012), thus avoiding generalizations. In treating clients uniquely, and by inquiring about their culture the clinician may be able to form a stronger therapeutic relationship (Asnaani & Hofmann, 2012). Further, clinicians should

make efforts in increasing their knowledge of TGNC culture proficiency by attending lectures and trainings to further increase the clinician's level of awareness and understanding (Hughto et al., 2015). In doing so, clinicians will lessen the likelihood of TGNC individuals experiencing additional barriers and expand the level of care that is provided to the individual (Hughto et al., 2015).

In discussing the comparison of likelihood to display their faces, Chan (2016) highlighted the significance of safety. TGNC individuals need to feel safe in their homes and communities before properly managing their overall health (Torres et al., 2015). Due to this, clinicians cannot work through the process of gender identification without first recognizing the potential safety barriers (Torres et al., 2015).

Presence of dominating masculinity

Rodriguez et al. (2016) discuss the negative impacts of the presence of masculinity on dating apps. Though this may be the case for some TGNC users, clinicians need to understand that not all TGNC individuals will present or identify with concerns on masculinity. For instance, there are many female-to-male (FTM) individuals who identify as masculine and are comfortable with their masculinity without genital surgery (Mayer et al., 2019). On the other hand, there may be TGNC individuals who identify as neither male nor female and prefer to remain gender fluid (Motmans et al., 2019). In working with TGNC individuals, clinicians should discuss with the individual if they have an identified gender or if they are gender fluid. Through this discussion, clinicians can further assess the potential impact of the presence of masculinity, and what the presence of masculinity on dating apps means to the individual.

Sexual health and risky sexual behaviors

In discussing sexual health and risky sexual behaviors, clinicians should not focus their attention solely on prevention and health concerns due to the possibility of the individual feeling shame for experiencing pleasure through these behaviors (Naisteter & Sitron, 2010). Thus, clinicians may find it beneficial to utilize a harm-reduction approach within psychoeducation. Harm reduction was implemented in the 1980s in response to the spread of HIV and is intended to *"meet people where they are"* (Bayles, 2014). Naisteter and Sitron (2010) contend that by utilizing harm reduction to provide education on sexual health, individuals will be provided the opportunity to mediate between pleasure and safety; which will result in individuals being more likely to make harm-aware decisions.

Trans-misrepresentation and sexualization

Clinicians working with a TGNC individual who is experiencing misrepresentation and sexualization should recall that this level of stigma has the potential to cause both psychological and physical harm (Hughto et al., 2015; Lloyd & Finn, 2017). Research has directed clinicians toward alleviating stress response that is associated with experiencing trans stigma (Hughto et al., 2015). Stigma interventions have been created to assist individuals in changing attitudes, increasing coping mechanisms, and diminish the effects of stigma on an interpersonal-level (Hughto et al., 2015). Clinicians can further familiarize themselves with stigma interventions by referring to Hughto et al.'s (2015) article and Gronholm et al.'s (2017) article.

Previous literature and records of personal accounts have suggested that many TGNC experiences, or have experienced, shame concerning gender identity (Giordano,

2018). Therefore, along with stigma interventions, clinicians should center counseling for transgender individuals in minimizing any shame that they may have regarding their transgender identities (Hughto et al., 2015). Clinicians can utilize tools such as psycho-education on self-esteem and coping tools to assist the client throughout these interventions.

Online based interventions

Kesten et al. (2019) stressed that online-based interventions should be engaging, in a sex-positive tone, and delivered by trusted organizations. Online interventions may not mirror what an in-person clinical intervention would look like, however, it is essential to carry similar qualities of in-person interventions into practice. According to Sadaat (2014), therapeutic relationships and treatment process can be negatively impacted if the clinician is not empathetic, understanding, or have effective communication styles.

Limitations

A major limitation within the existing literature is the fact that much of the research referenced by authors focus on MSM. In doing so, themes of cultural impacts fail to take into account women who have sex with men, and women who have sex with women. Additionally, this limitation may restrict the understanding of the experiences of females transitioning to males (FTM), or individuals who are biologically female but are GNC.

Future research

In addition to the themes noted above, the authors suggest that future research look at the possibility of positive and/or negative effects on psychological well being for dating app users. With the limited amount of research that is available regarding TGNC individuals and dating apps, by assessing

these psychological effects clinicians can further determine what clinical work needs to be done within this population. Additionally, future research may identify further themes that are present in TGNC use of dating apps and technology that were not noted by the authors of this paper.

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Original Article

Self-presentation of males and females in an online dating application: A profile analysis from north India

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Abstract

This study was aimed to explore how males and females self-present themselves in an online dating mobile application. We selected consecutive 50 males and 50 female heterosexual profiles from an online dating application in west Delhi (India). A descriptive data analysis was done for socio-demographic details, profile picture and self-description. Males present themselves with details about their work, and they tend to show costly items/body muscles/outing/sports pictures in their profile. Notably taller males mentioned about their height. Males also mentioned about the alcohol/smoking status and favourite music. Females usually kept a selfie in a western outfit with fewer details in self-description. Both the sexes were equally descriptive and used similar words in their self-description. The purpose mentioned by both the sexes was to look for a lover in the dating application. These findings of this study can help in understanding the differences between males and females in their self-presentation on an online dating platform.

Introduction

Love is one of the needs of a human, as often said that human is a social animal (Maslow, 1943). Finding a potential life partner is a big task, which completes the circle of life. With the advent of the internet and mobile, searching for a partner through online dating or matrimony websites/applications has become prevalent (Finkel et al., 2012). Websites are the web pages accessed through a web browser in laptop/mobile. An application is a software or program accessed by installation in the mobiles/tablets for regular use. Matrimony applications/sites are for people to search for a life partner for marriage. While dating applications/sites are for people to date each other for a romantic

or sexual relationship, which may or may not lead to an off-line relationship (either romantic or non-romantic). Some ties may lead to long term relationship or friendship and may or may not result in marriage.

The use of dating applications among young adults is wide spread mainly in western countries and now becoming more popular in countries like India. The widespread information, communication technology coupled with the emergence of business websites for computer dating, paved the way and offered a new avenue for exploring and establishing new romantic relationships. The purpose of dating application may range from both casual and serious romantic relationships (Lykens et al., 2019) or for lonely adults to use it for meeting new people (Berk & Myers, 2016). In today's busy life, online dating has become convenient, and it offers an expanded pool of partners to choose from. The dating application allows a user to create his/her profile with pictures and self-description. These applications use artificial intelligence/algorithm to display the user with their potential mates. The user decides to show his/her interest based on the profile picture and the self-description of the individual. When both the users show interest in each other, then only interaction can take place among them(Levy et al., 2019). As said 'the first impression is the last impression', a user has to create a socially desirable profile in which a large number of potential partners shows interest. Males and females have certain biological and social differences, which are reflected in their behaviour and preferences (Halpern et al., 2007). While choosing a mate, personal preferences and numerous factors play a vital role (Buss, 1989). Males and females have a distinct way to charm the opposite sex. Limited studies have captured the differences among sexes in an online dating application. This study was aimed to explore how males and females self-present themselves in a dating application in northern India.

Methodology

This was a descriptive study done in West Delhi (North India). In this study, we analysed the dating profiles from a dating application. We chose an application based on popularity. We included consecutive 50 males and 50 female heterosexual profiles. We did not exclude any profile. In the search setting; the age range was 18 to 55+ years, and the maximum distance was 20 km nearby. The data were extracted on 15th September 2019 under the following variables - age, job, description, number of pictures, details of the photograph, self-description. Each profile was de-identified by giving a code to it, and the confidentiality of the data was maintained. No picture was saved or captured. Data were directly entered in a data extraction sheet (in MS Excel) from the profile, and data analysis was done using STATA 13. Descriptive analysis was done for male and female profiles under the headings of socio-demographic details, profile pictureand self-description of profile. Chi-square test was used for the test of significance. Differences with a p-value <0.05 were considered statistically significant. For word counting and word cloud formation, we used the 'word counter' for the analysis (Data Basic, n.d.).

Results
Socio-demographic details

We analysed fifty male and fifty female profiles. Age was mentioned by 88% of males and 100% of females. The median age (IQR) for males and females was 25.5yrs (IQR 24 - 27.5) and 24.5yrs (IQR 19 - 26), respectively. Compared to females, a higher number of males provided the link/ ID of their social media accounts (40%) like Instagram ID or Snapchat ID, mentioned their affiliated college/company (60%) and mentioned their occupation(66%) (Table1). Most of the dating profiles were of students (61.7%).

Table 1- Socio-demographic details of the dating profiles

Socio-demographic Profile	Male (n=50)	Female (n=50)
Mentioned age	44 (88%)	50 (100%)
Median age (IQR)	24.5yrs (IQR 19 – 26)	25.5yrs (IQR 24 – 27.5)
Provided link/ID of another social account	20(40%)	15 (30%)
Mentioned the name of their affiliated college or company	30 (60%)	21 (42%)
Mentioned occupation	33 (66%)	27 (54%)
Student	14 (42.4%)	23 (85.1%)
Doctor	1	0
Lawyer	2	0
Charted accounted	1	0
Analyst	5	0
Manager	5	2
Engineer	1	1
Teacher	0	1
Pilot	1	0
Actor/ Model	1	0
Builder	1	0
Interior designer	1	0

Table 2- Details of display pictures of profiles

Display Pictures of Profiles	Male (n=50)	Female (n=50)
Display profile was available	50 (100%)	49 (98%)
Number of photos posted/displayed [Median (IQR)]	6 (IQR 4 – 7)	4 (IQR 2 – 5)
Used someone else's picture or displayed a quote (misrepresentation)	1	1
Selfie*	9 (18%)	23 (46.9%)
Showing iPhone in pictures*	8 (16%)	0 (0%)
Showing car/bike in pictures*	10 (20%)	0 (0%)
Flaunting biceps or abdomen muscles/bare chest*	11 (22%)	0 (0%)
Picture clicked inside the gym*	4 (8%)	0 (0%)
Picture with a dog	1 (2%)	3 (6.1%)
Picture from a trip or outing or travel*	23 (46%)	8 (16.3%)
Picture of playing sports* (swimming, water sports, tennis, quad biking)	6 (12%)	0 (0%)
Picture with food or drink	3 (6%)	4 (8.2%)
Picture while shopping	0 (0%)	2 (4.1%)

* P-value<0.05

Profile picture analysis

The display pictures were available for all the males and 49 females(Table 2). The median (IQR) number of display pictures available for males and females was 6 (IQR 4 - 7) and 4 (IQR 2 - 5), respectively. Five male and four female profiles uploaded a group picture. A significantly higher number of females (46.9%) uploaded picture in the form of a selfie. Males showed valuable items in the pictures like the iPhone (16%), car/bike (20%). Males displayed the pictures clicked inside the gym (8%), flaunting their biceps or abdomen muscles (abs)/bare chest (22%) or playing sports (12%). Also, a significantly higher number of males uploaded their picture from a trip/outing/travel. Most of the male profiles had formal dress (like coat/blazers, shirt, pant) in their profile pictures. Western outfit (jeans, miniskirt, shorts, t-shirt) was ubiquitous among female profiles (Table 3). The dress was not visible in 18 male profiles, and 11 female profiles as most of the pictures were limited to face and few pictures of males were shirtless.

Self-description analysis

Self-description was available for only 60% (n=30) of male profiles and 42% (n=21) of female profiles. Most of the self-descriptionswere very short and crisp like *"leveled up lawyer, anime lover, TV tellytubby, drive demon, meme master, gridlock gamer, badminton baddie, crème brulee is my true weakness"*. The total word count for male and female self-description was 348 (average-11.6) and 233 (average-11.6), respectively. The most common five words (number of times)used by male profiles were - looking (n=5), lover (n=3), fun (n=3), love (n=3), true (n=3). The most common five words used by female profiles were - lover (n=4), looking (n=4), smart (n=3), friendship (n=2), new (n=2). The word cloud showed the use of similar and most common words(the predominant word is more prominent in size) by both the sex (Figure 1).

Eleven male profiles (36.7%) mentioned that they were looking for a relationship or love, meaningful/good conversation, friend, fun in their description. Nine female profiles (42.9%) mentioned they were looking for a relationship, friend. Seven of the male profiles mentioned their height, which ranged from 5'10" to 6'3". Two male profiles asked for a coffee date in their description (Table 4). Only one profile (female) mentioned personal dislike, i.e. fake person. Both the sex (male and female) presented themselves as foodie, music lover and party

Table 3 – Type of dress in the profile picture

Sex	Type of dress in the picture	Number of profiles
Male (n=50)	Formals predominant	15 (30%)
	Causals predominant	14 (28%)
	Both	3 (6%)
	Dress not visible	18 (36%)
Female (n=50)	Ethnic	5 (10%)
	Partywear	3 (6%)
	Western outfit	19 (38%)
	Mixed	5 (10%)
	Not able to classify	7 (14%)
	Dress not visible	11 (22%)

Figure 1- Word cloud showing twenty most common content words used I

lover. A higher number of males mentioned about their favourite music (26.7%) and alcohol/smoking status (16.7%).

Discussion

We found that a higher number of males mentioned more about their occupation and affiliation (work), which was similar to the findings of Davis et al. (Davis & Finger man, 2016). Usually, it is anticipated that females may post more photos understanding the importance given to physical attractiveness; however, in the present sample, it was males who posted more pictures to convince potential partners. The purpose of these pictures might be to display their physical strength (showing gym pics,sports, portraying biceps) and also to indicate their wealth or affordability (picture with iPhone, car/bike; travel pictures) which may attract

the women. Our results are in line with evolutionary theory (Buss, 1988), which was also tested among 37 cultures and showed that females value financial capacity/ resource acquisition, ambition-industriousness of potential mates compared to males (Buss, 1989). Our finding of males focusing on their financial and occupational success was also similar to studies done by Mc Williams et al. and Alterovitzet al.(Alterovitz & Mendelsohn, 2011; Mc Williams & Barrett, 2014).

We found that a low number of females provided their self-description and provided a smaller number of profile pictures compared to males, which could be due to safety reasons. The average word count and the words used in self-description among males and females were almost similar. We did not find anyone reporting the reason/

Table 4 – Result of description analysis of profiles

Profile Description	Number of male profiles	Number of female profiles
Description was provided	30 (60%)	21 (42%)
Described their what they looking for in dating app (e.g. looking for looking for a relationship , love, meaningful/good conversation, friend, fun)	11 (36.7%)	9 (42.9%)
Mentioned 'not for hookups'	1 (3.3%)	3 (14.3%)
Described themselves as a dog lover	2 (6.7%)	0 (0%)
Described themselves as foodie or food lover	4 (13.3%)	6 (28.6%)
Described themselves as fitness freak or sports lover	4 (13.3%)	1 (4.8%)
Mentioned their zodiac sign	3 (10%)	0 (0%)
Showing to be multilinguistic	2 (6.7%)	0 (0%)
Music lover	5 (16.7%)	3 (14.3%)
Traveller	9 (30%)	3 (14.3%)
Mentioned height*	7 (23.3%)	0 (0%)
Knows how to cook and do laundry	3 (10%)	0 (0%)
Loves to party	2 (6.7%)	2 (9.5%)
Mentioned themselves as 'shopaholic'	1 (3.3%)	1 (4.7%)
Loves to dance	0 (0%)	2 (9.5%)
Mentioned about alcohol drink/use(beer, whisky, wine) or smoke (pot, cigar) use*	5 (16.7%)	0 (0%)
Mentioned tea or coffee	3 (10%)	2 (9.5%)
Mentioned their favourite music*	8 (26.7%)	2 (9.5%)

*p-value <0.05

purpose for using the dating application as for casual sex/hook up on contrast to a study done in the United States, which found that 17.9% of women and 33.1% of men reported using dating platforms of hookup (Lykens et al., 2019). Two reasons can explain this. First, profiles did not mention it because of social desirability in expressing intentions of casual sex. A spremarital sex is against the existing social norms in India (Chakraborty & Thakurata, 2013; Mahajan et al., 2013); but a survey shows that more than a quarter of youngsters are involved in premarital sex in North India (Sharma, 2001). Second, it is possible that the sampled profiles were genuinely looking for a life partner/ lover. We found that to attract the opposite sex, males mention about their height (notably taller males), present themselves as a traveller, and muscular. Males mentioned

about cooking and laundry skills in the self-description and presented themselves to be a multilingual, dog lover, and a fitness freak might be the new dimensions for a desirable dating profile. These findings may not be statistically significant, but can not be ignored as they reflect the changing presentation of the current young generation.

To the best of our knowledge, this was the first study from India for analysis of online dating profiles. We had a small sample size from one dating platform, limited to younger adults, and the probability of mis representation or a fake profile can not be ruled out. Therefore, findings from this study cannot be generalised. Further studies with larger sample size and participant interviews are required to generate more evidence. However, the study could not provide an in-depth understanding of the concept of online dating in the Indian context. Also, how marketing/business strategies are contributing to the increase in online dating may be explored further.

Conclusion

Most of the college students used these dating applications. Males posted a higher number of pictures and displayed pictures with valuable items, physical strength and presented themselves travellers, gym/sports lover compared to the females. The purpose mentioned by both the sexes was to look for a lover on the dating application. These findings can help in understanding the differences between males and females in their self-presentation on an online dating platform.

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Original Article

Love at first byte: A mixed-method study about online dating in India

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Abstract

The advancement in social media has influenced how we communicate in daily lives, especially towards our partners and romantic relationships. It is important to understand how people present themselves and perceives others, how we relate to each other during the process of online dating.

The aim of the study was to explore the attitude of Indians towards online dating and to explore the qualities of a potential partner and self-concept of the respondents.

An online cross-sectional survey was done using a self-report questionnaire. The study was conducted by Whatsaap and Gmail and included only volunteers.

The study found that the majority of people (90%) would come for chatting with other people and the most common traits among the desirability of the people to be loyalty and honesty followed by understanding and sense of humor. It also found that the majority of the people were looking for a long term, stable relationship.

As online dating and matchmaking have become rampant, people should try to keep themselves informed and proceed to the world of online dating with a little caution.

Introduction

Although there has been an effort from a long time to intervene in the process of love and romantic relationships of people as the saying goes, "love defies all calculation". The explosion in the use of Smart phone applications such as dating apps has significantly transformed many aspects of society, communication, and relationships among people. Online dating (also known as internet dating) is referred to as an alternative to meet the potential partner through various media such as through dedicated websites or online dating application such as Tinder,

Happn or Grindr, OkCupid, etc. via smart phones to develop personal and romantic relationships (Rosenfeld & Thomas, 2012).

The development of technology has considerably changed the patterns of communication and so has the equation of romantic relationships (Sassler, 2010). The advancement of the technology and explosion in the usage of smartphones has changed the way we deal with the outside world by their various applications (Lee & Bruckman, 2007). According to a national survey regarding dating and relationships in the digital era, 11% of American adults especially singles (38%) and looking for relationships in the US, have used Online Dating agencies or dating applications. European countries also rely heavily on online dating (38%) as an effective method for choosing their romantic interests (Gatter & Hodkinson, 2016).

According to a survey done in 2018, almost half (46%) of the daters had found their partner online through dating apps, and men are more likely to fall in love and get married to their online romances than women while online dating. 52% of the user base accepted that dating apps made them more judgmental to physical appearance and peoples' looks (Lykens et al., 2019).

The users of online dating services have admitted that 53% have lied in their online dating profile. Women lied more than men and the most common dishonesties being about looks and physical appearance and in their profile, posted edited photos and photos of their younger selves while men mostly lie about their financial status (Heino et al., 2010).10 % of online dating profiles are fake and online romance scam is on top 10 out of 1000 scams, reported in Consumer

Sentinel (Economic times, 2017). In 2018, 2.7% of people in India used an online dating service. This tripled the amount over 2017. 20-30% of users are from small-town and the majority of the user base is of the age of 24 years or younger. The most popular dating sites in India are 'Tinder' female-friendly app 'Bumble' and 'OkCupid' and they have made an effort to penetrate the India dating market (Heino et al., 2010). In India, the majority (74%) of the users are men while only 26% of users are female.

A data given by Tinder uses and revenue statistics revealed that there are 57 million Tinder users in 190 countries and its available in 40 languages and per week 20 million users go on date. About 95% of the user base of Tinder meet their matches within in a week. 2% of male Tinder profiles identified as homosexual or bisexual, compared with 0.01% of female profiles (Clement, 2020). In selecting the partner for dating women prefer mates with high socioeconomic status while men prefer physically attractive women. Overall, users valued interpersonal communication more than sex appeal (Menkin et al., 2015). A survey reported that the use of dating apps has increased significantly during the COVID-19 pandemic, reportedly 82% of single daters turned online for their dating needs during the self-quarantine in their homes. Half of the people reported their preference for dating online, in the beginning, to get acquainted with their potential partners to avoid the spread of COVID-19 and remain safe. 30% of the users said that they are going to just stick with messaging and chatting with matches until they can meet up in person. Only 5% of singles reported that they are going to stop dating altogether until the virus passes (Kar, 2020).

People with low self-esteem and who engage in risky sexual behaviors are more likely to be involved in online dating ((Sasson & Mesch, 2014). A study identified that adults have six motivations to use online dating: love, casual sex, ease of communication, self-worth validation, thrill of excitement, and trendiness. These motivations differ according to one's age and gender. Tinder was recognized as a hookup app without emotional intimacy, bonding or a committed relationship (Sumter et al., 2017).

Online dating websites has its disadvantages too as it involves issues related to limited social presence, distrust in the protection of personal information, time-consuming, most of the time unrelated physical presence. A study found that those who engage in online relationships tend to have low levels of concern and people with risky sexual behaviors are more likely to be involved in online interaction (Heino et al., 2010).

Earlier, online dating sites were stigmatized as a venue for the desperate. Now it has become a popular platform to meeting mates. The study of current trends of online dating and a high user base can provide insight regarding this phenomenon. Finding partner on online dating system have much larger pools because of its credibility, depth of information shared in profiles and the sentiment that it is a more natural environment where people with the same interests can meet and interact (Hamilton, 2016).

The involvement of people with online dating websites or applications may also be related to their attitudes and perceptions about it, the people believe that they could easily build relationships online and can interact in an environment without meeting them in person (Heino et al., 2010). Hence, the study aimed to explore the attitude of Indians towards an online dating or internet romantic relationship, who should be an ideal dating partner and self-concept about themselves.

Methodology: The study was initially conceptualized as a qualitative study, along with detailed in-depth interview with people. Later after conducting a few interviews, the approach was changed into a mixed-method study based on self-report. This study was conducted online as a survey on dating behaviors in India. A self-report questionnaire was developed using available literature into an online form and sent to the contacts through social media. The study was conducted virtually on the internet using commonly used social media platforms such as WhatsApp, text message, and e-mail.

Participants: This study only included volunteers. The inclusion criteria were kept as broad as possible. Participants from the age-group of 18- 50 years were approached online. People who have access to smart phones, internet connection, and used social media platforms such as WhatsApp, Facebook, etc. were included in the study.

Variables: The variables under the study can be broadly classified into socio-demographic variables, attitude, and experience about online dating and reported self-concept and qualitative responses. They were asked about their expectation from a partner and why would someone like to date them.

Tools: A self-structured online questionnaire with 4 sections was developed in view to observe the research variables. Informed consent leads to the opening of the form which after collecting the socio-demographic details assesses on a multiple option scale the attitude of the respondent regarding online dating. After that section, the self-concept is reported on a 5 point Likert-scale. And the respondents have to answer the qualitative components in short answer type text entries. The quantitative variables were socio-demographic variables, attitude scale, and perceived self-concept.

The qualitative data has been thematically coded and analyzed. We used statistical methods such as mean, standard deviation, and frequency and percentage and thematic coding.

Results: We received 105 responses from Feb 20th to March 26th, 2020.

Socio-demography : The mean age of the participants was 25.33 ± 4.73 years and the age range of the respondents was from 19-39 years. The majority of responses in the study were received from, Uttar Pradesh, followed by West Bengal, followed by Delhi, Maharashtra, Chhattisgarh, Karnakata, Mizoram, Bihar, and Uttarakhand (Fig:1). 65.1% of the respondents were male. The majority (86.8%) of the people followed Hinduism. 76.4% of the participants resided in the urban area followed by 13.2% in the semi-urban area and rest in the rural area (10.4%). The majority of the participants (69.8%) were educated above the graduate level (38.7% graduate and 31.1% postgraduate). 70.4% of the respondents never dated online before.

Attitude about online dating: Among the 51 people who had dated online before, 29% started dating in 2020, 31.3% had been dating before 2016. 78 people replied to the question regarding their reasons for dating online. 37.2% were looking out for stable long term relationships. 24% were checking people out and 15.4% were looking for open relationships, and 14.1% were looking for hooking up and 9% were looking for casual dating relationships. Among all the participants (N=105), 81% preferred dating offline, only 15.2% wanted to date online. 85 people responded to the question regarding their choices on the online dating among them. 90.5% preferred to chat with their potential partners, 27.4% wanted to video call, 17.9% wanted to share pictures, 13.1% wanted to 'sext' (sexual chatting) their

partners the respondents seemed least likely to send audio and video clips.

The response to the question regarding their interest in offline dating was given by all the 106 participants, 56% of the respondents were interested in meeting their potential partners in a café, almost 40% wanted to meet them at a restaurant, 24% wanted to meet them at a mall. Among 105 respondents 31.7% wanted to date online and 38% did not want to date online and 29% had already been dating online.

Self-concept rating : The self-concept of the people is summarized in Table 1. The major findings regarding the self- concept of the respondents are that more than half (55%) of the participants felt that they were satisfied with themselves, more than half of them (56.6%) thought they could respect themselves more. 94% of the respondents had a positive attitude about themselves.

Qualitative analysis: The study had two broad questions. The first question requires the respondents to outline the qualities that they want to highlight about themselves that can be criteria for likability for online dating. The second question was about characteristics that interest the responder. The broad opening questions had various types of responses these were thematically organized into a few characteristics.

The responses of the first question, found the most common traits among the desirability of the people to be loyalty and honesty followed by understanding and sense of humor (Fig 2). Physical beauty and family background were found to be some of the least reported preferences for dating among men and women both

14 responses from the men were regarding uncertainty about their qualities (why they should be liked). Three of those people who were uncertain about their qualities were also

Table 1: Self-concept of the respondents (N=105)

Sl.	Statement	Positive response
1	On the whole, I am satisfied with myself.	89.7%
2	At times I think I am no good at all.	59.4%
3	I feel that I have a number of good qualities.	93.4%
4	I am able to do things as well as most other people.	88.7%
5	I feel I do not have much to be proud of.	59.6%
6	I certainly feel useless at times	55.7%
7	I feel that I'm a person of worth.	82%
8	I wish I could have more respect for myself	19.8%
9	All in all, I am inclined to think that I am a failure.	84.9%
10	I take a positive attitude toward myself.	93.4%

uncertain about what they were looking for in their partners. Five responses of women were regarding their uncertainty about their likability but they did have reasons for their likability.

Some of the typical responses from the men received in the study are   *"I am an honest,* *compassionate, dedicated person with simplicity and adjustability".* This is a good way of perception and such qualities are usually expected by the women. The most typical response received from the women regarding expectation from a partner was *"honest loyal and respecting with a good sense of humour".*
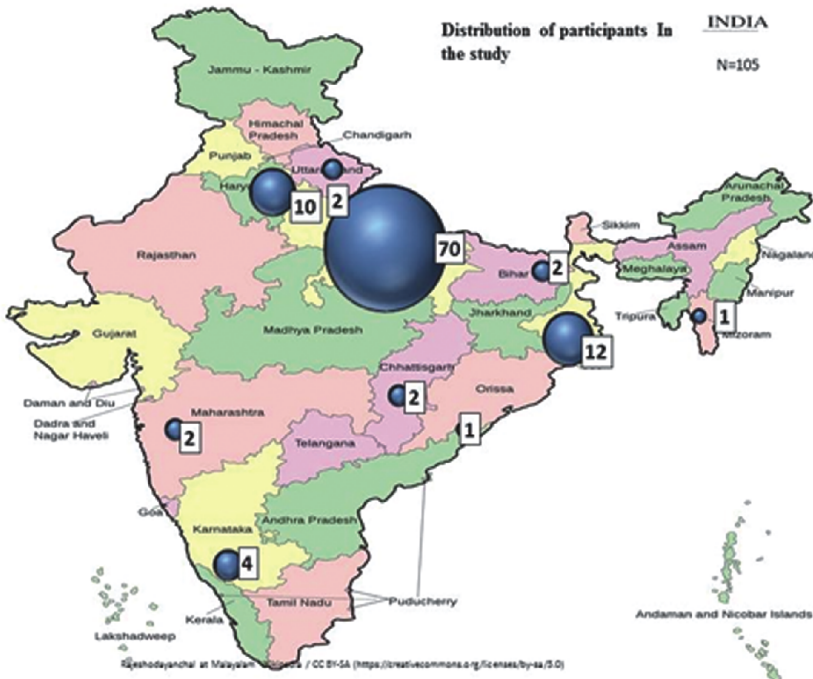

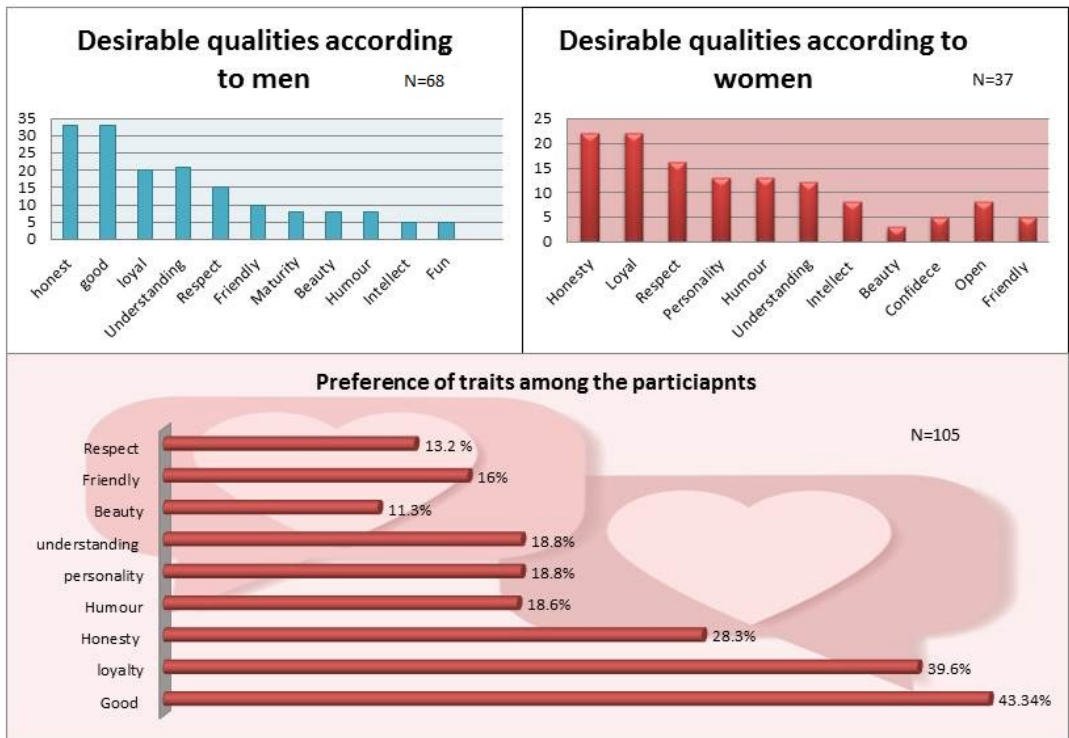**Figure 1: Distribution of participants in the study**

Figure 2: Characteristics of the participants

Looking at the expectations from the men in the study we typically find a pattern (Fig 2). The most typical response received from men regarding their expectations of qualities from their partners includes the following, *"Loyal, great sense of humor, intelligent"*. The response of women to about their likability typically consisted of responses such as *"I think I'm witty, smart, caring, and fun to be with"*.

The study found that a very less number of people 8.5% gave importance to physical beauty as a quality to be expected in their potential partners which is quite contrary to the common belief.

Discussion

The internet has become an undeniable part of the modern world. The majority of the work has already moved online through the internet, along with socialization. The romance has also gone online; people look for their potential partners online. Dating, which has separate platforms online now affects relationship formation and progression majorly. According to studies, millions of people look for partners online and dating sites try to provide suggestions using algorithms (Su & Hu, 2019; Xia et al., 2016). So, our study was aimed at what people perceive about online dating and how it affects them. Men and women both use the internet and various applications to engage in romantic relationships online. Our study was aimed at identifying people's preferences about dating and preferable traits in their potential partners. We took adults from the age of 18-50 years. Studies have reported that the age of dating although it is much less than that of the conventional age, can range from 15- 70 years many dating apps have age, gender, and sexual orientation-specific sites and applications (Su & Hu, 2019). A review of literature from 2012 reported that there were high chances and good scope for people to date online, the landscape of dating has been changing and online dating gives

increased access to potential partners and helps them match with each other (Finkel et al., 2012). This does not always guarantee a better outcome of the relationships. In contemporary times, it has become a common platform for seeking more than just romantic relationships. There are specific reasons why people turn into certain online applications. Usually, all types of people come on dating applications and social sites to look for potential partners. So, it is not only the online dating apps but the matrimonial sites and social networking sites also are platforms for searching potential partners and engaging in sexual and romantic relationships. The present-day dating scenario is much more than romance, it has hookups, and open relationships, various people come online for various reasons. Our study found that the majority of people would come for chatting with other people (89%). Online dating platforms usually use that feature to provide matching and use that to get to know about the people from there (Frazzetto, 2010). The studies on online dating had similar socio-demographic features to this study, young people, residing in urban areas with access to the internet and educated up to high school were among the participants of their study (Lykens et al., 2019). We considered people above the age of 18 years but studies say that much younger population also accesses online to involve themselves in romantic relationships (Hamilton, 2016). In rural areas of the developed countries people were less into online dating (Lykens et al., 2019). In our study, respondents were belonged to urban areas majorly.

Studies have reported that men and women look for different qualities among their potential partners (Xia et al., 2016). In our study, we found that there was similarity in some characteristics and differences in many of them. The most common desirable quality among men and women were loyalty and honesty; the findings show that there is a chance of trust issues when people date online, many studies have reported that people usually fake their profiles to make themselves attractive, the virtual world makes it possible to create illusions about oneself. This could be the most important reason behind honesty being the most desirable trait while looking for a potential romantic partner (Sasson & Mesch, 2014). In our study, we found that majority of the people were looking for stable relationships mostly for the long term and some for uncertain periods but only 14% of the respondents were looking for 'hook-ups' on line. This finding is a little different from the findings and claims of online dating agencies and applications (Frazzetto, 2010; Gatter & Hodkinson, 2016). The majority of the participants in the study were willing to date online or were dating online, which indicates that online dating has taken a big place in the lives of the generations. The current scenario of pandemic and social distancing has become beneficial for people to look for dates online. Although there is reduced contact people are more engaged in romantic activities online for their loved ones as reported by news (Friedman, 2020). The other qualities both noted by men and women are 'good, loyalty, honesty respect, understanding, humor, friendliness, and beauty'. Although a majority of the profiles did not mention the physical beauty they emphasized more on the qualities, like, respect, understanding, humor, maturity, etc. this also shows that people are shifting their views from the apparent notion of physical beauty. Few participants responded very differently from the others its worth to note a few, a male participant responded to the question about his likability like this, *"because I'm decent, educated, have a class and a good background"* another male participant responded, to the same question that, *"because*

I deserve it". There was another important pattern that could be noted which is put into the section of desperation. We found that some people think that they need to date someone just for being in a relationship as they say. *"I am interested in dating", "Because I am single"* and *"people should date me as everyone needs to date someone and so I think someone should date me".* This type of statement also depicts that dating among young adults is the norm and if people remain single they feel desperate to be in relationships. This type of person gets vulnerable online and can become potential targets for abuse and usually end up in difficult situations (Collibee et al., 2018; Collibee & Furman, 2014; Lykens et al., 2019). When we look at expectations of people from their potential partners online, we observe the pattern where, honesty, loyalty, understanding, humor, respect, and responsibility were the most sought after qualities. Participants valued those traits over physical beauty in the majority of the responses. A few of the unusual responses received in the expectation of partners were, *"she should be beautiful with remarkable features of a great asset which I can bank on at times to take a decision".* another uncommon response received was, *"Good Looks, Good Looks, Good Looks".* Another deep-rooted colonial mind-set was also depicted, where people focused on traits of good personality, understanding, and intelligence one response was notably just, 'Fair skin'. These types of behaviors were also noted in studies throughout the world (Collibee et al., 2018; Lykens et al., 2019; Su & Hu, 2019). The preference still people chose offline dating instead of online dating. The reasons are obvious dating and romance seek to fulfill the basic need for companionship and mating and a majority of it is unachievable by online means.

Conclusion

Online dating has become a common trend, people making profiles online and dating people has become a general commonplace. This has led to the development of separate platforms, specially dedicated to romantic and sexual match making and relationships. They have impacted social life since the early second decade of the millennia. Online dating and match making have become a rampant and easy solution to people for connecting and being together. The cheap access to the internet and enormity of social media makes one inevitable to engage in such type of behaviors. Our study found that people in India currently prefer offline dating more than online dating, although majority of them try online dating. Usually, people look for stable and long term relationships for dating but there are also a good number of people who wish to have open relationships and hook-ups. There is only limited opportunity to get to know the person and usually, the romance can become fast-paced. Online dating is an effective way to search for partners as it becomes easy to find people near and far to start a relationship with but people with poor self-concept and desperation can bring about issues regarding exploitation abuse. The data published online is virtually indestructible so there are high chances of fraud and technology-facilitated sexual abuse which can be detrimental to both the physical and mental health of the associated person. Generally online was found to be an acceptable method to look for partners, and make friends with people whom you may not meet otherwise. The online dating exposes the younger age group to vulnerabity of being abused and fraud. Many People who have ill intentions may pose as a friend can harm a vulnerable person. This study is limited to small sample size and larger sample with more detailed studies will be needed to generalize the findings. Mental health is usually vulnerable to relationships in life; online relationships can have both beneficial and detrimental effects on the lives of people who pursue so.

People should try to keep themselves informed and proceed to the world of online dating with a little caution. This will make the experience a smooth and expected one.

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Commentary
Sexual misconceptions in Bangladesh: Role of digital media

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Abstract

Sex and sexuality are integral aspects of human civilization and has a positive influence on human lives. Various myths and misconceptions are associated with sex and sexuality in many countries including Bangladesh. A narrative review has performed to reappraise the myths and misconceptions associated with sex in Bangladesh. The common misconceptions are related with Dhat syndrome, deformity of the penis, changes in penile size, duration of intercourse, masturbation, and nightfall. Misconceptions about sex can be disastrous with detrimental effects on family life. Social media plays a vital role in misconnection both in positive and negative aspects. Social media can influence thinking and can be used to educate the population to fight the battle against popular misconceptions. The use of digital media to enforce a positive and mature approach towards sexual education can help tackle this menace. The study has suggested conducting more scientific studies to assess the role of digital media on sexual misconceptions.

Introduction

Bangladesh is a developing country in South Asia with more than 160 million people and achieved health-related Millennium

Development Goals (MDG) significantly (Health Bulletin, 2018). The literacy rate is increasing day by day and currently, the adult population literacy rate is 72.9% (Health Bulletin, 2018). However, the health literacy state is still in dearth in Bangladesh as formal education, training, and research on this subject are limited (Arafat and Ahmed, 2017). Though the Government of Bangladesh has recently taken an initiative to expand adolescent-friendly health services

(AFHS) throughout the country to extend sexual and reproductive health (SRH) services to unmarried adolescents, there is no structured sexual education program at the school level or by the family in Bangladesh (Ainul et al., 2017). This is so because sex and sexuality remain taboo and prohibited for discussions due to social, cultural, and religious reasons. As a result, in the 21st century, myths and misconceptions about sex and sexuality is still a covert issue in Bangladesh (Arafat, 2019; Arafat and Ahmed, 2017; Ahsan et al., 2016), though, over the past several decades, Bangladesh has made remarkable progress in human development indicators (Bangladesh Bureau of Statistics [BBS], 2016; Sawada et al., 2017). From a medical viewpoint, the reproductive system is as important as any other system in the human body and hence diseases related to the reproductive system including sex and sexuality need to be addressed without stigma. Bangladesh, therefore, has recognized an exemplary championship of unprecedented success story in terms of family planning and maternal and child health and renowned as 'miracle' across the world (Adams et al., 2013; Sawada et al., 2017). Unfortunately, over the same decades, Bangladesh's culture of silence around sexuality has not been changed at that level. With the advent of sexually transmitted diseases such as HIV/AIDS, there has been some transition from silence to discussions focused on unsafe sexual practices leading to the contraction of deadly diseases. Besides, modern technology has a definitive role in contributing to this transition (Rashid and Akram, 2014). Furthermore, available studies except for some discussion meetings on the misconception about sex and sexuality issues and the role of digital media could be found very limited in Bangladesh that resolving about sexuality misconceptions. Eventually, regarding the issue, empirical studies are not available globally. However, such studies are essential for policymakers to adopt new intervention and investment plans for improving sexual education, beliefs, and behavior in Bangladesh. Thus, this study aimed to identify the existing misconceptions about sexuality in Bangladesh and what role of available digital media platforms can play towards the misconceptions. The findings from the study show that available misconceptions on sex and sexuality exist in Bangladesh and what, and how digital media can play a role in existing sexual misconceptions in either direction.

Sexual misconceptions in Bangladesh

Several misconceptions about sex and sexuality are available in Bangladesh. The common myths and misconceptions are related to Dhat Syndrome, size of the penis, duration of intercourse, deformity of the penis, elongation of penis, masturbation, nightfall (wet dreams), and homosexuality. Dhat syndrome is a culture-bound syndrome of the Indian subcontinent which is characterized by a preoccupation with loss of 'Dhat' (semen) and attribution of different physical and psychological symptoms (Arafat, 2017). Popular misconceptions about male sexual functions revolve around ejaculation disorders, erectile dysfunction, and lack of libido. Another obnoxious common misconception that is present in society for decades is that 'a man who cannot sexually satisfy his partner is not a real man'. Many factors such as medical factors, partner-related factors, relationship-related factors, individual vulnerability factors, and cultural & religious factors may influence sexual dysfunction in males but it has been believed that due to bad behavior such as masturbation this problem arises. Popular myths also exist about sex organ size, duration of intercourse, and sex position amongst many people in Bangladesh. It has been believed that sexual capability in contrast to financial capability is the attribute

of a real man. In this context, to be a real man should have a large, and/or long penis. Regarding penis size people's opinion is varied but preference is given to in between 6-10 inches and men thought that otherwise, a woman will not be able to feel that what is going in and out of her vagina! Eventually, there is a misconception that women are sex hungry and therefore, unable to be satisfied even by two or three men. Regarding the myths of sexuality, another very recent study identified different myths from the male perspective and show that some men believe that women also ejaculate when they experience orgasm. Some believe that semen is the essence of life and its loss damages one's health and sexual intercourse and sex during pregnancy harms the health of a woman. Moreover, the study found more indulgence in sex at a younger age. 'Dreams wets' refer to weakness. Women's virginity is also a concern to men and a woman's virginity has been prooved by her intact hymen (Miah et al, 2015). Another study revealed that masturbation is only done by boys or men. However, it is scientifically proven that masturbation is a normal phenomenon irrespective of gender (Arafat and Khan, 2019; Rashid and Akram, 2014). White discharge, menstruation, and wet dream are identified as bad for health. Eventually, during the menstruation period, people often tend to use the term 'Shorir Kharap' instead of the name of the natural process (Miah et al., 2015; Alam et al., 2017). Another misconception is that eunuch people do not have or have incomplete sexual organs. Homosexuality is considered a mental disorder by many. Science stated that sexual desire comprises of sexual thoughts, fantasies, and needs and wishes to engage in sexual relationships regardless of gender. The patriarchal system in Bangladesh does not acknowledge female sexual desire (Alam et al., 2017).

The burden of sexual misconception

Sex and sexuality are important aspects especially for the adolescence and a crucial public health issue (Cash et al., 2001). One study in Bangladesh found that about 55% of the patients of a psychiatric sex clinic had misconceptions and 29% visited only for misconception (Arafat and Ahmed, 2017). Misconceptions associated with sex and sexuality sadly dominate society and unfortunately, there is not much data available from reliable sources to gain apt knowledge in this regard. On the other hand, good sex education helps in the desirable decline of associated mortality thereby preventing unwanted, early and risky pregnancies, and sexually transmitted diseases. Empirical evidence shows that both in an urban and rural area, local and foreign pornography available by the internet is the main source of sex education (Rashid and Akram, 2014). It is also a familiar source to be educated about sex from available local magazines sold by street hawkers. Blue film via portable CD and DVD is also one of the common sources to learn about sex. The local cinema hall is also a prominent source of information about sex and sexuality. Undesirable knowledge about sex and misinformation about the topic, in general, may mislead the public thereby encouraging sex crimes, unrealistic expectations about sex causing problems in healthy family life.

People are influenced by existing sources to know about sex and sexuality and try to do it real life. Due to the practice or malpractice therefore, many times these arise unwanted situations like rape and other sex crimes, the problem in family life and health. As sex and sexuality still are taboo in Bangladesh, people may not able to share their thoughts and sought their quarries which may lead to occur violence in society. Studies have shown that people always stay in anxieties due to sexual

performance believing the sexual myths and misconceptions (Arafat, 2017). On the other hand, adversely affected by the existing sources. Moreover, for common health problems such as white discharge, fistula, prolapse, menstrual problems, reproductive and urinary tract infections, and sexual problems people usually a choice to informal healthcare sources such as vaids, kabiraj, shamans, and traditional healers (Arafat and Ahmed, 2017; Rashid et al., 2011; Rashid and Akram, 2014). A recent study has revealed that inappropriate knowledge about sex from pornographic sources can result in the stronger partner which is usually men demanding these favors from their weaker counterparts. Refusal from their partners to indulge in these acts can result in men choosing to pay for sex to satisfy their sexual fantasies despite knowing the risks associated. Sexual gratification is variable and may be oral, anal, sadistic, group encounters, or without using any protection which can be fatal due to the prevalence of sexually transmitted diseases. Some myths exist around the use of the condom with the condom being a barrier to attaining sexual gratification (Rashid and Akram, 2014).

Role of digital media

Nowadays social media has become an essential part of everyday life for people all over the world. In early 2020, more than 4.5 billion people across the world have been connected to the internet, while more than 3.8 billion people use social media. Bangladesh has rapidly adapted to the digital era with 55% of the population being connected to the internet (We Are social Inc., 2020). Interestingly, in Bangladesh, around 94% of the social media users access social networking sites like Facebook and Twitter through mobile phone devices, while 24% of the declared profiles of the country's Facebook users are female (Alam et al.,

2017). Therefore, there is no doubt that people especially adolescents are becoming increasingly connected to the digital world and that they are using social media to find support and information they want including sex and sexuality in Bangladesh.

Social media is an umbrella term describing social networking sites and platforms where users create their personal or group profiles and share content with others. Such a platform is a well-established valuable communication tool for community building and meaningfully contributes towards bringing a change in society (Manduleyet al., 2018). In contrast to traditional sexuality education, the digital environment offers anonymity, informality, portability, and the ability to remotely interact with peers and experts (UNICEF, 2019). The freedom of information offered by Social media allows people to access sites from almost anywhere in the world when required. Therefore, digital health interventions such as Facebook or YouTube may develop and include opportunities for interpersonal connection, community development, and comprehensive health information. A recent study on digital intervention for sexual health has concluded that digital intervention provides accurate information about sexuality according to one's needs (Steinke et al., 2017). Digital media might be the appropriate strategy to improve the quality of sexual life as well as reduce misconceptions. Significant opportunities exist to improve the education of sex and sexual health issues through the proper utilization of digital media (UNICEF, 2019). Though the use of social media can have major impacts on reducing misconceptions about sensuality. However, simultaneously evidence also shown that unscientific and unregulated posts, with a society's acceptance and supportive of myths and misconceptions, in digital social media may influence people adversely. Because fake

or unscientific information can constitute social conditions that are conducive to sexual misconceptions among people in society (World Health Organization [WHO], 2010).

Conclusion

Sex and sexuality education through digital media have identified a tool which can offer to gain accurate knowledge to improve attitudes and practices against myths and misconception. To promote digital media ensuring its proper use, more study is required in Bangladesh. The study suggests that Bangladesh should give priority to the development of technical guidance and formulate a structured framework for sex education through digital media using an international website platform such as Google, YouTube, Android etc. to provide accurate information under the strong regulation system to control unscientific and unauthentic information.

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