

Opening Pandora's Box: Analysing the Perspective of Law Students towards Sexual Assault in Online Gaming

Dr Sonali Sharma¹, Dr Priya Bhatnagar^{2*}¹Assistant Professor, Campus Law Centre, Faculty of Law, University of Delhi²*Associate Professor, Vivekananda Institute of Professional Studies, VIPS-TC, Delhi**Received: 29/11/2025;****Revision: 30/12/2025;****Accepted: 03/01/2026;****Published: 17/01/2026*****Corresponding author: Dr Sonali Sharma****Abstract**

In the year 2024 a 16 years old British girl was reportedly raped in the metaverse. This incident drew attention of many towards the most difficult question and that was that can a sexual offence take place even without a physical contact in a virtual world? Undoubtedly, artificial intelligence and metaverse are the topmost noticeable technology trends that are being discussed in the present era. It is imagined as a continuous and collaborative area where digital replicas of ourselves, known as avatars, may freely navigate between different experiences while retaining our identities. Howbeit, in a survey reported by Outlaw it was noted that with 609 virtual reality users, 49% of female users reported having at least one previous encounter with sexual offences in virtual world. This proves that the case in Britain is not an isolated incident as similar instances are being reported across the globe. India now has a new set of criminal laws however one needs to ask whether these new laws are capable of handling what the future has stored within it. Through empirical research the authors in this study wish to highlight the views of our budding law students towards sexual harassment under the garb of avatar in virtual reality games. This study highlights those sexual offences in a virtual world is a harsh reality from which there is no escape and it is an ardent need of the hour that our legal system is capable enough to tackle this conundrum.

Keyword: Metaverse, sexual offences, artificial intelligence, virtual reality gaming, criminal laws**INTRODUCTION**

Snow Crash-The famous book written by Neil Stephenson in the year 1992 can be given the credit of being one of the first works that depicted a parallel universe of virtual reality.¹ His predictions that such a virtual reality shall exist along with the real world is being proved by tech giants including Meta and Microsoft.² In this book he coined the term Metaverse. In the world of virtual reality users can not only interact but also socialise with one another in the same manner as they do in a real world. The world provides a number of opportunities such as purchase and invest in virtual real estate, buy or sell virtual goods, gain virtual employment, host virtual social events and playing games by using virtual reality etc. In an online gaming platform this virtual reality is being used so as to provide a real time experience to all the gamers. However, these experiences are sweet as well as bitter. Before one moves on to a bitter discussion about the evils in the virtual spaces one needs to understand the various nuances of a game using virtual reality.

Virtual reality is a form of technology which helps in creating a three-dimensional platform that surrounds the user. On the other hand, an augmented reality helps in creating a real life scene for the user. Augmented reality gives an interactive experience which increases the virtual experience with the aid of perceptual information

that is generated by the computer. With the help of not only software and applications; augmented reality intersect digital world with the real world. Where virtual reality is an artificial space, augmented reality gives sensory enhancement to the user and thereby levelling the three-dimensional experience to a four-dimensional impression. Apart from these realities another technology which is known as blockchain technology plays a crucial role in an online game. Blockchain technology collects data in groups. These groups are called "blocks". These blocks are placed in storage and linked in the form of a chain. When virtual reality, augmented reality and Blochian technology work together, it gives the user an exhilarating feel of fictional realities which we now distinguish as a metaverse. Companies such as Meta, Roblox, Minecraft and Fortnite are some of the most popular companies that are building games on Metaverse.

In the present era the online gaming experience is enriched by various other factors such as haptics and avatars. Haptics is nothing but a science whereby a sense of touch and control are applied during interactions with computer based applications. They offer an additional dimension in an online game wherein the gamers can receive the feedback from their gaming application in the form of sensations that can be felt through any parts of their body. With the help of haptics,

gamers not only hear and see their gamers but can physically feel the interactions happening between the images in their games. For example with the help of this a gamer playing a game can actually feel the impact of getting hit during the game.

On the other hand, an avatar which is derived from a Sanskrit word means a graphical representation or a character that is controlled by the gamer in the virtual world. It can be said that an avatar is the virtual alter ego of the gamer in that game. Players have the ability to customize their avatar on the basis of their gender, physical features as well as personality traits. They can also interact with other users in the form of cooperative or competitive games. They can communicate through gestures or emotes. They serve as the virtual personality of the gamer and thus allowing them to completely engage them in the world of gaming. They are just like a vessel which takes the gamer through the challenges and virtual interactions during the game.

From the above discussion it may appear that virtual reality gaming holds a vast arena of prospects however, in the recent past some of the ventures in this have also shown the potential for innovation as well as complication. As virtual reality is being utilised by powerful tech giants to build a platform for giving a thrilling and life like experience to gamers it cannot be ignored that it is also becoming a place for non-consensual violent behaviours.³ In recent times there have been multiple reports that the avatars of female gamers were being sexually assaulted while they were playing a game in a virtual world. Even though these instances are not directly happening to the body of a female in a real world withal, they need to be discussed as the harm that they cause cannot be in any way less than the one that can be caused in a real world. These instances need to be discussed and the crime must be addressed by our criminal system. It cannot be overlooked that our society is well equipped with an advanced technological system which has resulted in a remarkable virtual world. Thus, it is our moral obligation to ensure that a suitable legal system is also in place so that the users of this virtual world are protected in the same manner as in the real world. That legislation must criminalise actions such as virtual sexual assault so as to uphold the ethos of justice, liberty and equality as given in our Constitution. An accused who has committed an offence should not merely escape the clutches of law by committing that act in a virtual world. Such a legislation will help the users to play an online game knowing that there are legal consequences if an offence such as sexual assault is committed. Given the fact that virtual world is the current reality, legislators must take virtual sexual assault with utmost seriousness and ensure that proactive steps are undertaken to secure this world. Until then, users would be free to exploit this technology to fulfil their evil intents.

Thus, this research is being conducted with varied objectives: *first*, to highlight that virtual sexual assault in an online game is no more a myth *secondly*, to emphasize that our penal law is insufficient in handling a virtual sexual assault *thirdly*, to analyse the opinion of law students towards virtual sexual assault and *lastly*, to propose a legal system that balances the rights of the victim as well as the accused. In order to achieve these objectives it is pertinent to first prove that sexual offences are being conducted in a virtual world. To address the same there is a need to evaluate various instances of sexual assaults that are being reported time and again.

Sexual Assault in Virtual Reality: A Study of Cases across the Globe

Virtual reality gaming can be understood as games which use screen-based virtual play as well as immersive virtual reality play with head mounted displays and haptics which are held in hands. The popularity of virtual reality can be displayed by the fact that 171 million people worldwide are using it.⁴ Youth between the age group of 18 to 34 is considered as the largest group which is engaging in virtual reality to enhance their gaming experience.⁵ Growth as well as intensification of virtual reality in games is expected to increase multi fold with the ongoing technological developments such as haptic feedbacks and sensory integration. Virtual reality has undoubtedly increased the gaming experience however, some report otherwise. In 2020 more than 70 female gamers came out on popular social media platforms and spoke about the ordeals their avatars faced in the online gaming world.⁶ They said that their avatars were being sexually stalked, doxed, harassed and harmed in the gaming world. According to a survey conducted by Bryter⁷ in 2023 it was reported that 59% of female gamers have experienced some form of violence from male counterparts and 28% reported that they regularly experience such episodes. Most of these women fall between the age group of 16 to 24 years. It was also reported that 14% received rape threats, 30% were sexually harassed, 30% received an inappropriate content and 42% were verbally abused. This data manifests a harrowing scenario where females are being targeted to predatory and inappropriate behaviour. These instances have sparked conversations about ethics, safety and consent in gaming world using virtual reality. However, this report does not manifest anything unusual as time and again there have been complaints by female gamers wherein they have stated that they were targeted in many online games. Thus, it is pertinent to look at the platforms where females complained that their avatars were sexually harassed. Some of these virtual reality gaming platforms are as follows:

- **Second Life**

Second Life is a famous multi player online game where in a virtual world a gamer can enter by creating an avatar. The users can then interact with other users through their avatars. Over the years this game has

become a platform for sexual harassment where female users began reporting that their avatars were being subjected to unsolicited sexual acts or simulated rape in a virtual world. Moreover, it was observed that female avatars were often targeted due to their gender and male avatar would perform unwanted sexual gesture or lewd comments.⁸

- **World of Warcraft**

Yet another massively popular multi player role playing online game that has received complaints of sexual harassment is World of Warcraft. In this game several women have raised objections that their avatar was sexually exploited. Women have been the target of sexually explicative messages, verbal harassment and sexist comments solely on the basis of their avatar's gender. Moreover, in some extreme instances females were also stalked with male players invading their virtual spaces to engage in unwanted behaviours.⁹

- **VRChat**

By using a 3D environment the users can interact with each other through their avatars. The most troublesome fact about this gaming platform is that there have been various reports of virtual groping where male avatars would make inappropriate gestures in ways that would appear like a physical contact between them. Female users have reported that they were harassed by using offensive language and sexually provocative gestures. The catch in this game is that the act actually leaves a psychological impact upon the victim as she can feel that she is physically surrounded by unsolicited interaction in a virtual place.¹⁰

- **League of Legends**

Female users playing this multi-player online battle game have reported that they have received comments which varies from insults to unwanted sexual proposals. It was further seen that the cases of harassment were more likely to occur when the player was using a female avatar or using the voice chat. This would make it easy to identify them by male avatars. Females have also argued that they were objectified and targeted merely because of their gender.¹¹

- **Twitch**

Twitch is an online platform where users can stream their game video. Here as well females have reported that their avatars have received verbal abuse in the form of sexualised comments directed towards their avatars. Moreover some comments were even addressed towards the streamer's real life personality as well.¹² It was reported by Anti-Defamation League that female avatars are more likely to face harassment as compared to their male avatars.¹³

- **Sexual assault on LambdaMOO in 1993**

In March, 1993 a character named Mr. Bungle entered a crowded living room in a text based virtual platform namely LambdaMOO. His self-description was very

crude to an extent that could offend anyone on the platform. After entering the platform he began using a voodoo doll and started using the sexual prowess of the doll upon another user namely Legba. Despite being forced out of that room he could control Legba as that was one of the powers of the doll. With the aid of that doll, he could also control the actions of Legba even from outside of that room. His attention was not limited to Legba but was also focused towards other characters such as Starsinger, Juniper and Bakunin. Mr. Bungle's character became more aggressive until he was finally put to stop by another character namely Zippy. In reality the person behind the character Legba was a doctoral candidate from Haverford, Pennsylvania. She filed a request on LambdaMOO that her character was raped by Mr. Bungle. After a heated discussion the character, Mr. Bungle was removed. However while the character Mr. Bungle was removed but the user behind it was not. It was reported that after a few days the user returned as Dr. Jest. This incident came into light as the first ever incident of sexual harassment at a virtual platform.¹⁴

- **Sexual assault on Quivr in 2016**

In October, 2016 a gamer, Jordan Belamire in an open letter to Medium described about how she was groped on Quivr. Quivr is a game in which the player could shoot at zombies by using bow and arrows. Belamire while explaining her ordeal reported that when she entered the multiplayer mode in the game another avatar namely BigBro442 started rubbing the chest of her character. When her avatar started running away BigBro442 started chasing her and started to make sexual motions towards her chest. The user even rubbed her avatar's crotch area. After she made the complaint the founder of the gaming platform apologized to her and improved their game by introducing a V gesture for the avatars. This gesture would help the avatars by automatically pushing any offenders away.¹⁵

Apart from these complaints on specific virtual reality gaming platforms there have been complaints of sexual assault filed by individual female gamers while playing a virtual reality game. Some of these instances are as follows:

- **Sexual assault in Echo-VR in 2021**

Sydney Smith was playing virtual game in July 2021 when another user entered and taunted her by saying that he had recorded her voice and will perform a sexual act using her voice. She also reported that she had to withstand lewd comments and sexist remarks for a long time.¹⁶

- **Sexual assault in Metaverse in 2021**

In December 2021, Nina Jane Patel, a psychotherapist spoke about her awful experience when she was gang raped virtually in Facebook's metaverse. As per the victim she described that with the advancement of technology she felt as if the act took place in reality in the physical world with her. It was barely 60 seconds that she had joined the virtually reality whereafter her

avatar was being raped by three to four others male avatars. As per her the avatars even took pictures of the horrendous act and when she tried to pull away, they yelled at her with demeaning statements. A spokesperson from Meta assured her that company shall help her in investigating and taking an action in this matter. Another response to her complaint was the addition of a safety feature (a 'bubble') that protects an avatar from unwanted behaviour from other avatars.¹⁷

- Sexual assault in Population One in 2021
A gamer Mari DeGrazia reported that she faced sexual assault in the form of groping while playing the game. She said that she was wearing a haptic vest when another user groped her. Due to the vest she could actually feel being groped in the virtual world.¹⁸
- Sexual assault in Horizon's World in 2022
A researcher from Ekō in May, 2022 expressed her nightmare in Meta's virtual reality wherein she was raped. The researcher expressed that after using that platform for about an hour she was led into a private room. Inside that room she was raped by another user. She explained that the accused repeatedly asked her to turn around as well. The most disturbing aspect of this matter was that there were several other users who were watching this whole incident from outside a window and passed around a bottle of vodka.¹⁹

- Sexual assault in Metaverse in 2024
A 16-year-old girl from United Kingdom reported early this year that while she was playing a virtual game her avatar was raped. It was reported that the girl was wearing a virtual reality headgear when she was attacked. The case is being investigated by the police officers in UK.²⁰

Although all these instances are from various countries other than India but still one cannot say that such an act cannot take place with an Indian citizen. Online gaming is not limited to the jurisdiction of any one country. By using technology players from multiple countries can come together and play games with each other. Thus it is essential to determine whether Indian laws are capable enough to tackle a situation of sexual assault on an online gaming platform.

Analysing the effectiveness of Criminal Laws in India in curbing Sexual Assault in Virtual Reality
The term sexual assault is an umbrella that covers a range of sexual offences including sexual harassment, voyeurism, stalking, fondling, forcing some-one to preform sexual act, rape and marital rape. Not all forms of sexual assaults are penalised by all the nations howbeit, every nation penalise rape though the ambit varies. Rape universally requires some form of sexual contact such as vaginal penetration or contact with the anus or mouth by the penis. Regardless of its scope one common element of sexual assault is that it is committed either without the consent or with the consent of the victim howbeit, the consent is not a valid one.

Despite the fact that the term consent is difficult to define however, it cannot be denied that it embodies three essential elements which are *first*, whether the consent was given affirmatively *secondly*, whether it was given freely and *lastly*, whether the person had the capacity to give a valid consent. The capacity of a person to give a valid consent is determined by a variety of factors including age, disability, consciousness, relationship between the persons, vulnerability and intoxication. A consideration of all these factors can determine if the act was in fact an offence or not.²¹ In India sexual assault includes rape (except marital rape), sexual harassment, voyeurism, stalking, fondling, forcing some-one to preform sexual act howbeit, the ambit of these offences is somewhat limited to the physical world.

The Bharatiya Nyaya Sanhita, 2023 provides definitions for all forms of sexual harassments in India. As per this Sanhita rape²² is defined as a sexual assault in which a man either penetrates through his penis or by any object inside the vagina, mouth, urethra or anus of a woman or manipulates a body part of a woman so as to cause such insertion or applies his mouth on the vagina, mouth, urethra or anus of a woman. The section further provides that the said act must be done *against* the will of the woman or without her consent. The consent is not considered as a valid consent if it is taken under duress or by misrepresenting that the accused is her husband or under intoxication or she is unable to communicate her consent or if she is under eighteen years of age. The Sanhita states that consent must be an unequivocal voluntary agreement wherein the woman either by words, gestures or any form of verbal or non-verbal communication, communicates her willingness to participate in that specific sexual act. The Sanhita provides the most stringent form of punishment for rape which can range between ten years of imprisonment to death penalty in cases such as rape upon a girl less than twelve years of age, rape resulting victim in a permanent vegetative state, gang rape in case where the victim is less than eighteen years of age and repeat offenders.²³ Sexual harassment by a man against a woman is also punished under this Sanhita. Sexual harassment as per the laws means physical contact which involves unwelcome sexual overtures, a demand for sexual favours, showing porn against will and making sexually coloured remarks.²⁴ The Sanhita also provides for several other forms of sexual offences including voyeurism²⁵, sexual assault with the intent to outrage the modesty of the woman²⁶ or with the intent to disrobe her²⁷. The Sanhita also punishes a person who intends to insult the modesty of a woman by saying a word, making a sound or gesture or showing any object in any form which will be heard or seen by the woman or intrude his privacy.²⁸ Stalking by man in the form of following or contacting or even monitoring her use of internet is an offence under this Sanhita.²⁹

It can be seen that the traditional interpretation of the definitions of all forms of sexual assault requires some form of physical connection and this is the prime reason behind sexual assault in virtual reality not fitting in the list of sexual offences. Despite this lack of physical connect in online games, time and again it is reported that with the advancement of sensory enhancing equipment like haptic technology, it is completely possible for a victim to sense the attack as if it is taking place in a physical world. Therefore, it is pertinent to argue that even in these online gaming platforms a form of physical connect is present. The technology is designed in such a manner that at some point of the game, the brain of the gamer can be convinced that whatever is happening to the avatar in the game is actually happening to the gamer in the real world. Hence, it needs to be addressed if this unsolicited touching that is happening in the virtual world which can be felt in the physical world with the help of advanced technology, should be treated any different from a contact in the physical world. The students of law are the upcoming stake holders of a legal system. Therefore, it is appropriate to observe their opinion on this issue of sexual assault in a virtual world.

Area under Study

The present study was carried out to highlight the understanding of varied concepts such as virtual reality, avatar and haptic technology. It manifested that there have been instances of sexual offences being committed in the online games using artificial intelligence, avatar, haptic technology etc. Due to this the laws in India were studied to evaluate the scope of addressing such incidents in our country. To further evaluate the understanding of this problem a survey regarding the opinion of law students was conducted. On the basis of thorough analysis of the responses and the research, suggestions are made to enhance the ambit of criminals laws dealing with sexual assault in India.

Methodology

The present study was carried out in a college in Delhi, India from November, 2024 to November, 2025.

- Material**

For the purpose of this study a structured questionnaire using google form was created. The questionnaire was divided into two parts: the first part was designed to collect data about the socio-demographic profile of the students and the second part was designed to collect data regarding their awareness about sexual offences in the virtual world. The second part consisted of 10 questions. Out of these 10 questions; 3 questions had a multiple-

choice answer and 7 were to be answered by making a selection between yes or no.

- Procedure**

Once the questions were drafted a preliminary study on 8 masters of law students and 12 bachelors of law students was conducted. On the basis of this study two modifications in the wordings of the multiple-choice questions were made. The universe for this research were students who were pursuing B.A. LL.B. (5-year law course), B.B.A. LL.B. (5-year law course) and LL.M. (2 years). 430 students were approached for this research.

Before handing out the google form the students were given a lecture for 120 minutes during which various topics such as rape (sections 63-73 of Bharatiya Nyaya Sanhita, 2023), outraging the modesty of a woman (section 74 and section 79 of Bharatiya Nyaya Sanhita, 2023), sexual harassment (section 75 of Bharatiya Nyaya Sanhita, 2023), disrobing (section 76 of Bharatiya Nyaya Sanhita, 2023), voyeurism (section 77 of Bharatiya Nyaya Sanhita, 2023) and stalking (section 78 of Bharatiya Nyaya Sanhita, 2023) were discussed. Additionally, the students were also informed about the case of sexual violence against the avatar of Nina Jane Patel and the incident that took place against a teenager in United Kingdom in 2024. The students were then explained the significance of the study and were informed that their confidentiality would be maintained if they participate in this study. After this session the google form was shared though the class representative with all the students.

- Participants**

Out of 430 students 140 students were present for the study. They agreed to be a part of this study and filled the questionnaire. Out of these 140 responses 5 responses were discarded due to incomplete information. Therefore 135 responses were evaluated for the purpose of this study.

RESULTS

- Socio Demographic Profile**

- Place of Residence**

It was found that 71.11% (n=96) of the participants were from Delhi and the rest were from various other states such as Haryana, Bihar, Uttar Pradesh and Uttarakhand in India.

- Age**

It was observed that 96.3% (n=130) were between 18 to 25 years and 3.7% (n=5) were between 26 to 30 years. There was no participant who belonged to the age group of less than 18 years and more than 30 years.

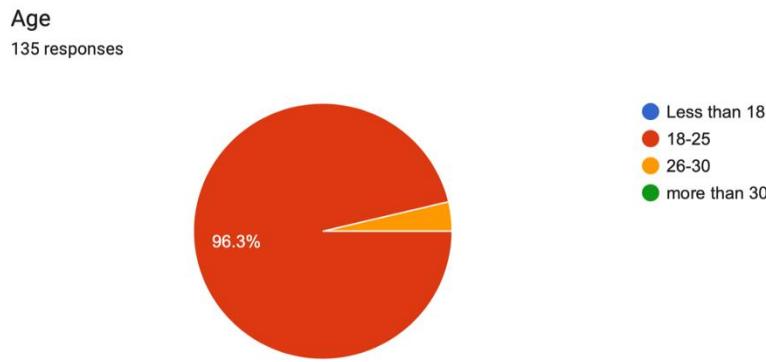


Fig. 1: Age

o Gender

Out of the 135 responses 53.3% (n=72) were females and 45.9% (n=62) were males. There was 1 transgender student as well.

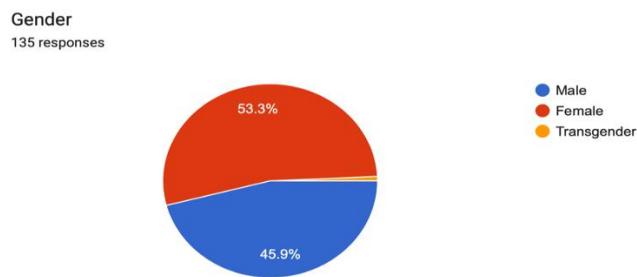


Fig. 2: Gender

• Analysis of relevant Questions

o *What do you understand by avatar?*

- There were three multiple choices as answers to this question. Out of all the choices 96.3% (n=130) agreed that it is an image that a person chooses as his or her embodiment in an electronic medium. 16.3% (n=22) further accepted that it is derived from a Sanskrit word and 16.3% (n=22) also agreed that it can be manipulated by a computer user.
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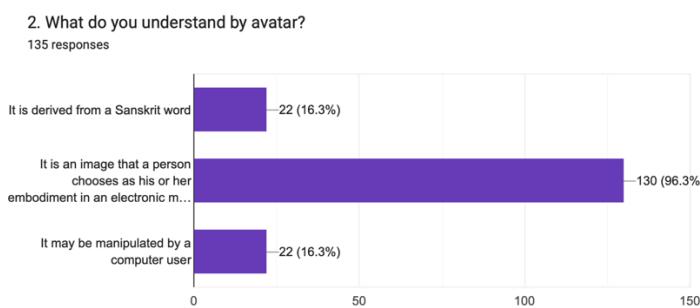


Fig. 3: What do you understand by Avatar?

o *In your opinion does an avatar has a capacity to commit sexual offence?*

- 71.9% (n=97) agreed that an avatar can commit a sexual offence however, 28.1% (n=38) did not have the same opinion.

5. In your opinion does an avatar has a capacity to commit a sexual offence?

135 responses

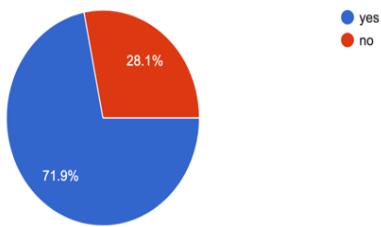


Fig. 4: Does an avatar have a capacity to commit sexual offence?

Have you ever come across such an incident of sexual offence by an avatar?

- 91.9% (n=124) did not ever come across any such incident of sexual offence by an avatar howbeit, there were 8.1% (n=11) who confirmed that they have encountered an incident of sexual offence by an avatar.

6. Have you ever come across such an incident of sexual offence by an avatar?

135 responses

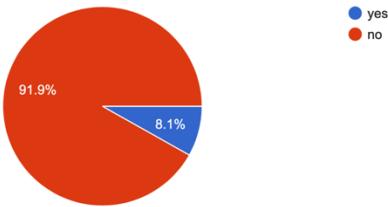


Fig. 5: Encounter of sexual assault by avatar

- *Do you think that laws in India are sufficient to address such cases of sexual offences on virtual platform.*

- 92.6% (n=125) did not agree that laws in India are sufficient to address sexual offences in virtual world howbeit, 7.4% (n=10) agreed that the laws are sufficient.

8. Do you think that laws in India are sufficient to address such cases of sexual offences on virtual platform

135 responses

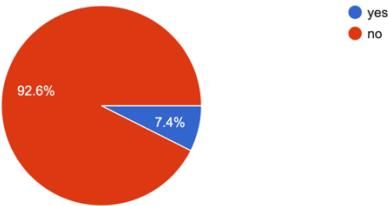


Fig. 6: assessment of Criminal Laws in India

- *In the light of the given case please decide whether the accused can be held guilty of any of the following offences under The Bharatiya Nyaya Sanhita, 2023*

- In the brief facts regarding the questionnaire the participants were given a case study. The case study was
 - *"Reema was playing a virtual reality game called The Lost Rider. In the game her avatar was a female namely Zushi. Barely 60 seconds into the game she experienced that four other male avatars started touching the private parts of Zushi and moments later it appeared that they were inserting an object (which was used by avatar to play in the game) in between the legs of Zushi. As per her the male avatars even took pictures of the horrendous act and when she tried to pull away, they yelled at her with demeaning statements. She described that though the act was taking place in the virtual world with her avatar she felt as if the act took place in reality in the physical world with her."*
- 40% (n=54) opined that in this case the accused should be held guilty of saying word, gesture or act which are intended to outrage the modesty of a woman. 22% (n=30) found the accused guilty for committing sexual harassment, 12.6% (n=17) considered the accused guilty for committing assault with an intention to outrage the modesty of a woman, 5.9% (n=8) held the accused guilty of rape and 1.5% (n=2) held him guilty for voyeurism.

- 11.9% (n=16) did not agree that the accused could be held accountable for any of the given offences and 5.9% (n=8) wanted to hold him accountable for any other offence.

7. In the light of the given case please decide whether the accused can be held guilty of any of the following offences under The Bharatiya Nyaya Sanhita, 2023
135 responses

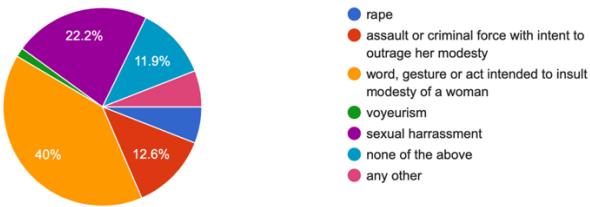


Fig. 7: Determination of Guilt under which offence

- Do you think there is a need to amend the criminal laws relating to sexual offences against women to accommodate such instances
- 88.9% (n=120) agreed that criminal laws in India need to be amended in order. To address such instances of sexual offences against women however, 11.1% (n=15) were not of this opinion.

9. Do you think there is a need to amend the criminal laws relating to sexual offences against women to accommodate such instances
135 responses

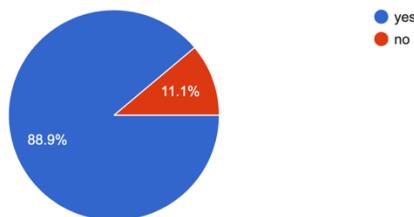


Fig. 8: Amendment of Criminal Laws

DISCUSSION

It is a popular notion that the use of advanced technology has enriched the gaming experience amongst the gamers across the globe. However, along with this enrichment in the gaming experience there are reports which states that with the use of this technology the possibility of sexual harassment in the gaming world has also increased. As has already been discussed the report given by Bryter supports this argument further by reporting that 59% of female gamers reported that they were sexually harassed. Moreover, this data finds support through complaints of sexual assaults on certain gaming platforms and some specific complaints filed by individual female gamers of sexual assaults while playing an online game. This includes the complaints made against sexual assault by a character named Mr. Bungle on LambdaMoo, child pornography case on Second Life, open letter by Jordan Belamire against Quivr, sexual assault on Echo VR as reported by Sydney Smith, Nina Jane Patel's complaint of sexual assault in Metaverse, sexual assault on Population One as reported by Mari DeGrazia, complaint of rape by a researcher from Ekō while playing Horizon World and lastly the latest case of assault made against a teenager during a

virtual game in United Kingdom. All these instances point towards one direction which is that the virtual gaming platforms are being misused by potential miscreants to commit sexual assaults against female gamers.

The core principle behind a criminal law is that that an act will be considered as an offence if it is declared so under the criminal law.³⁰ In other words, there can be no crime without the rule of law. A conduct even if it is immoral or anti-social is not an offence unless it is punished by the criminal law. Criminal law can be in any form, it can be customary or statutory. In India we follow the statutory form of criminal law which is The Bharatiya Nyaya Sanhita, 2023. As per this law, it is quite clear that any sexual act if done without the consent of the woman is an offence. In the virtual reality this aspect of consent gets blurred as the actions of an avatar may not display the correct intention of the user due to the limitation of technology. This can result in a misunderstanding about the consensual behavior of an avatar. Despite this, cases which reflect a clear case of non-consensual sexual attack should be addressed by a criminal law.

As has already been stated that there are various types of sexual offences recognized under this Sanhita including sexual assault, sexual harassment, voyeurism and rape. These traditional forms of offences though recognize assault in a physical domain are however, lacking in the aspect of virtual domain. The primary reason behind this interpretation is that the element of physical contact is necessary to formulate these offences which is not present in virtual world. Due to this fact it is more than often argued that sexual assault in a virtual world should not be equated with the impact in the physical world. Despite this gap, the gamers have reported that sexual assault in a virtual world feels no less than a physical world.³¹

The present criminal laws were drafted before virtual reality came into existence. These laws do take into account various aspects such as data privacy, data protection, data fraud, distribution of harmful content such as hate speech or pornography through electronic means but do not take into consideration sexual crimes that are conducted by using technologies while playing a game on a virtual reality platform. The impact of an offence on such platforms are more complex due to the immersive nature of this technology.

Slater and Wilbur in their study have shown that the psychological realism of a virtual reality platform feels so enchanting that for most users it is almost as if it is real. This phenomenon is known as 'presence' which can be understood as a state in which what is happening in a virtual platform actually feels as if it is genuinely happening. The prowess of virtual reality can be inferred due to this fact and it can be suggested that it is in fact a protentional sources of psychological trauma.³²

This emotional response towards the experiences on a virtual platform are also supported by neuroscientific research including Functional Magnetic resonance Imaging which have displayed that brain cells are stimulated when a person is exposed to physical as well as virtual reality.³³ The fact that in a virtual space the true identity of the perpetrator is hidden can have a deeper impact upon the victim. Furthermore, it may also not be necessary that the culprit would be within the territorial reach of the laws of the victim's country. The effects of this can include post-traumatic stress disorder, depression, social anxiety etc. It cannot be denied that the impact of sexual harassment on these virtual platforms can be different from one person to another. One may shrug it off as a bad experience while other can be deeply affected by it. Still this fact does not diminish the legitimacy of the discomfort that is felt by those who are affected as such instances can affect victim's sense of safety and trust while playing online games. To illustrate further on this aspect empirical research was conducted which displayed the approach of law students towards sexual assault in the virtual platforms.

During the study it was found that even though 91.9% of the participants have never encountered an incident

of sexual assault on an online gaming platform yet there were 71.9% of the students who agreed that an avatar is capable of committing a sexual offence. When they were asked to determine the category of the offence for which the accused should be held responsible as per the given case study then it was observed that 40% opined that in this case the accused should be held guilty of saying word, gesture or act which are intended to outrage the modesty of a woman, 22% found the accused guilty for committing sexual harassment, 12.6% considered the accused guilty for committing assault with an intention to outrage the modesty of a woman, 5.9% held the accused guilty of rape and 1.5% held him guilty for voyeurism. It can be inferred that a majority of participants were of the view that the accused has committed a criminal offence howbeit, 92.6% agreed that the laws in India are insufficient to tackle such cases of assault on a virtual reality platform. Additionally, 88.97% further agreed that we need to amend our criminal laws to address such issues. The question that holds primary importance at this juncture is the way our contemporary laws can be modified so as to address such a scenario.

At present these virtual reality platforms provides for various measures to safeguard users from sexual assault. One of them is the 'personal boundary' feature which is designed to protect gamers from unsolicited interactions. It creates a buffer zone around the avatar which prevents any other avatar from coming close and thereby preventing offences such as virtual groping. Even though it is a step in the right direction however there have been reports that this feature can be bypassed by tech savvy users and it does not protect an avatar from verbal harassments on these platforms. Thus, it leads to the observation that the effectiveness of these features is a subject of scrutiny. Therefore, it is of ardent need that our criminal laws are modified in such a manner that these gaps are filled before any major distress takes place.

Suggestions

The metaverse is no longer a dystopian reality – the first certainty is that it is here to stay, the second is that it is going to keep coming, and the third is that it will continue to build and evolve and present new challenges. It can be seen that over a period of time the criminal laws have advanced so as to incorporate cyber crimes such as fraud, theft and gambling. Moreover, sexual offences such as child pornography³⁴ and prostitution³⁵ if committed online is also an offence. Therefore, a similar approach must be seen when a sexual assault is happening using the technology. This research was not conducted merely to ring bells in vacuum but to suggest significant changes in our criminal laws. Harassment in Metaverse is more pervasive since the victim experiences it intimately which can result in a real psychological impact. New gaps keep on emerging in the legal framework as the technology qua metaverse is rapidly evolving. Further, the anonymity given by the Metaverse, often emboldens

the perpetrators to do acts which they might not do in the real world out of fear of repercussion. Hence, these platforms should be mandated to have a reporting mechanisms which provide immediate access to the victims to report such incidents. Furthermore, assistance of artificial intelligence and machine learning can be taken by these platforms to detect such acts/behaviour in real time as well so that necessary corrective measures can be taken to protect the victim. Moreover, the users must have an option to set up personal boundaries in Metaverse to protect them from any unwanted abuse. Even the government must carry out awareness campaigns to alert the users of the risks involved in Metaverse. It is the need of the hour that the issues highlighted are proactively addressed so that the cat can be belled at the initial stage itself and the inequalities and gender abuse of the real world is not replicated in the virtual environment as well. Additionally, it is important that the public is educated about the acceptable behaviour so that a safe environment can be fostered in the virtual world. It is crucial that the platforms involved are designed to mitigate harassment and not exacerbate it. A multi faceted approach is therefore required which *inter alia* educates and empowers the users of these virtual reality gaming platforms to prevent unsolicited interactions and create a more inclusive gaming environment.

In the light of the above discussion it is suggested that:

- The definition of the term "Avatar" can be under section 2 of the Bharatiya Nyaya Sanhita, 2023 as "*an image that a person chooses as his or her embodiment in an electronic medium*".
- In order to bring an act within the purview of the Bharatiya Nyaya Sanhita, 2023 it must be within its jurisdiction.³⁶ Clause (d) can be added within section 1(5) which may state that "*The provisions of this Sanhita shall also apply to any offence committed by an avatar or through any means in any virtual space in any place without and beyond India.*"
- Another significant requirement for bringing an act within the purview of The Bharatiya Nyaya Sanhita, 2023 is that that it must be declared an offence. A change in the definition of all the sexual assaults under the Bharatiya Nyaya Sanhita, 2023 would be a welcome approach. This change can be brought in the following way:
 - Under section 63 of the Bharatiya Nyaya Sanhita, 2023 clause (e) may be added in the definition which may state that "*A man is said to commit rape if he does any of the above mentioned acts in the form of an avatar while playing a virtual game using any form of sensory technology.*"
 - Under section 74 of the Bharatiya Nyaya Sanhita, 2023 it may be stated that "*Whoever assaults or uses criminal force in physical or virtual platform to any woman, intending to outrage or knowing it to be likely that he will thereby outrage her modesty shall be punished with imprisonment...*"
 - Under section 75(1) of the Bharatiya Nyaya Sanhita, 2023 the phrase "*A man committing any of the following acts in physical or virtual platform:... shall be*

guilty of the offence of sexual harassment" may be added.

- Under section 79 of the Bharatiya Nyaya Sanhita, 2023 the phrase "*Whoever, intending to insult the modesty of any woman, utters any words, makes any sound or gesture, or exhibits any object in any form, intending that such word or sound shall be heard, or that such gesture or object shall be seen, by such woman, or intrudes upon the privacy of such woman, in physical or virtual platform shall be punished...*" may be added.
- The traditional definitions of various forms of sexual assault requires physical contact. This requirement cannot be completely ignored while bringing a change regarding assaults in the virtual gaming platform. It is proved that with the advancement of sensory enhancing equipment like haptic technology it is completely possible for a victim to sense the attack as if it is taking place in a physical world.³⁷ Therefore, a case of sexual assault may be limited only in the games which uses this form of technology.
- In order to prove these traditional forms of sexual assault, traditional forms of evidences such as testimonies of victim and witnesses are used. To prove lack of consent in a gaming platform apart from the traditional evidences, technological evidences may also be used. It can include evidences such as screenshots of the game, audio or video messages etc.
- Last but not the least the trauma of a victim who faces an assault in a virtual world does not end when the exit the game. It increases when the offender commits the crimes under the garb of an avatar. Therefore, while deciding the compensation for the victim a fair consideration must be given to the psychological impact that the victim may face due to that crime from an unknown offender.

In light of the above given suggestion it is submitted that in a spree to advance the feeling of realism in a virtual world one must not forget the unintended consequences of the same. A virtual world just like the real world requires an aggressive form of enforcement of rules which is universally agreeable. Till the time these rules are made and implemented a gamer needs to keep themselves safe while playing games using virtual reality.

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