



*Kishinchand Chellaram College*

Churchgate, Mumbai - 20



# Srujan

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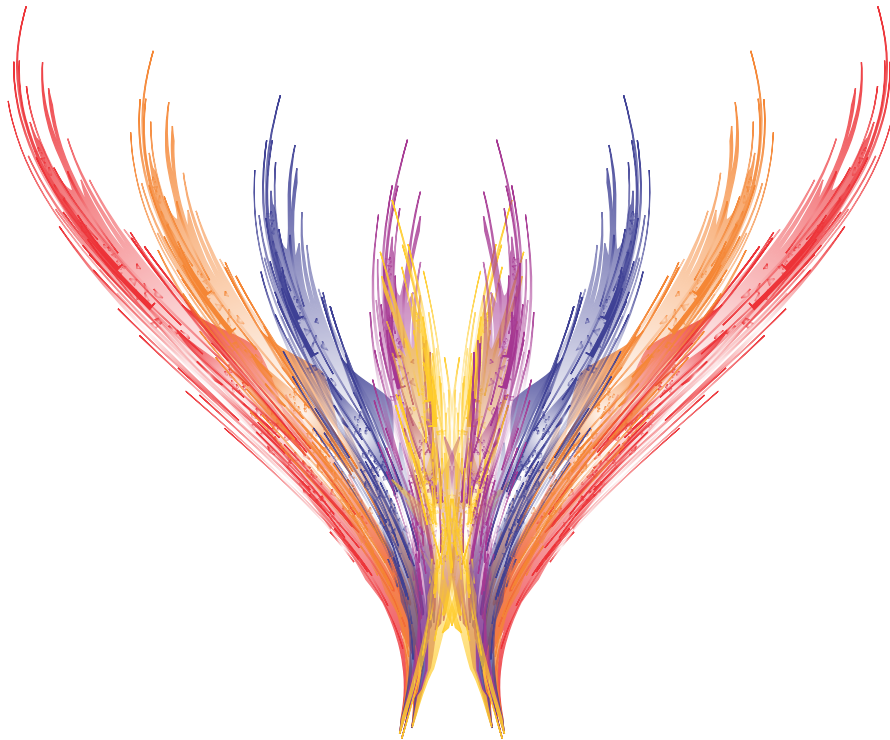


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## *Editorial*

Srujan 2024 presents a corpus of essays situated within multiple and shifting locations of humanities, social sciences, science and technology. The contributors underscore in their papers a new urgency to understand the long durée of a post-Covid world. The rapid transitions to technological interventions mandated much of the zeitgeist of a pandemic existence. However, it has also exposed transformational shifts in society resulting from the AI revolution and bioengineering revolution. These present new areas of inquiry which have been addressed in the papers in this edition of Srujan

The very fact that the ubiquitous presence of the digital life can be weaponised to deployment of hate speech via social media platforms or how ideas of health get gendered in digital spaces is a central concern for empirical studies by Abhishek Vinkare and Ayesha Dutt. Alina Syed's paper examines the moral and ethical dilemmas put forth by the possible advent of human cloning through her analysis of a film adaptation. On the other hand, Saadiya Shaikh's paper draws a renewed attention to the genre of memoir as a means to recover and record female voices and reclaim agency in spatially constructed gender identities. Pragati Thawani and Heta Purohit's paper presents a pedagogical value of quantum computing in higher education and its implications for the future of the field. Pratibha Shah et al record their findings on their empirical study on perceptions and practices on antibiotic usage are known for a community and the dangers of antibiotic resistance. Saba Ansari's paper draw a renewed attention to issues of gender safety and inclusive environments and the role played by Women Development Cells (WDCs) and Internal Committees (ICs) in South Mumbai colleges. Most of the papers are continuing areas of research for the scholars and invite readers to think critically about the future of humanity. We thank the authors for their papers and reviewers for their critical comments.

# Contents

<b>Digitalization of experience: Feminist reflections</b> <i>Ayeshna Dutta</i>	...01
<b>Understanding the link between Adolescent self-concept clarity and body appreciation, internalisation of the thin ideal, media &amp; peer pressure.</b> <i>Miraya Kanchan</i>	...08
<b>Complexities of the Displaced Female Space in Iran: <i>Persepolis</i> (2007) and <i>Reading Lolita in Tehran</i> (2003).</b> <i>Saadiya Shaikh Mohammad Kalimuddin</i>	...19
<b>Caste based Hate Speech in Digital Spaces: A Study of Select Social Media Platforms</b> <i>Abhishek Nutan Prakash Vinkare</i>	...24
<b>Complexities of Biomedical Interventions and Ideological Oppression in <i>Never Let Me Go</i> (2010)</b> <i>Alina Syed</i>	...32
<b>Quantum Computing in Higher Education</b> <i>Pragati Thawani and Heta Purohit</i>	...38
<b>Revolutionizing electric vehicle charging: a turbine-integrated approach for extended range and efficient cooling.</b> <i>Pragati Thawani, Tanu Bhardwaj, Jayalaxmi Shetty, Shruti Kashid</i>	...43
<b>Survey on Trends of Antibiotic Usage and Antimicrobial Resistance Awareness</b> <i>Pratibha Shah*, Shivani Patil</i>	...49
<b>Role of WDCs and ICs in fostering gender inclusive campus spaces</b> <i>Sana Ansari</i>	...55
<b><i>Author Index</i></b>	...67

## Digitalization of experience: Feminist reflections

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### **Abstract:**

*We live in a post Covid world which has seen the digital space growing and spreading its roots like never before. Having discussions of a society that is now living in a post truth situation, the digital constructions of everyday phenomena, transforming social events into digital ones can be considered as the process of digitalization. This paper focuses on how health related experiences are mitigated and managed in the digital space. Within the growing economy of digital health, apps that monitor our health data and keep us updated about our health issues is a growing concern within Feminist technoscience studies and the Feminist movement is closely getting associated with gender digital health activism. This paper looks at the sociality that connects people with the data about bodies. It portrays the constructions of the digital spaces, how ideas of health get gendered and at sync with societal oppressive systems of health. MenstruApps, Telemedicine, Online consultations of Psychotherapy, Sleep and diet tracking apps fall under this broad category of what I use to analyse the concept of how experience also gets digitized.*

*Keywords: MenstruApps, Digitization of Health, Feminist Technoscience Studies, Bodies as data, FemTech*

### **Introduction**

We live in a post-Covid world where the digital space has grown and spread its roots like never before. Having discussions of a society that is now living in a post truth situation, the digital constructions of everyday phenomena, transforming social events into digital ones can be considered as the process of digitalization. This paper focuses on how health related experiences are mitigated and managed in the digital space. Within the growing economy of digital health, apps that monitor our health data and keep us updated about our health issues is a growing concern within Feminist technoscience studies and the Feminist movement is closely getting associated with gender digital health activism. This paper looks at the sociality that connects people with the data about bodies. It portrays the constructions of the digital spaces, how ideas of health get gendered and at sync with societal oppressive systems of health. MenstruApps, Telemedicine, Online consultations of Psychotherapy, Sleep and diet tracking apps fall under this broad category of what I use to analyse the concept of how experience also gets digitized.

Human everyday life experiences are being digitized and such attempts are now celebrated globally. Various digital technologies like Artificial intelligence, virtual reality, augmented reality etc. are being used globally in various fields. These digitized experiences raise important questions about the implications of this shift towards a technologically mediated embodiment. The intersection of feminism and technoscience theory offers a valuable framework for analyzing and critiquing the digitization of bodily experience. Drawing on feminist standpoint theory, this paper aims to explore how women

conceptualize and respond to the digitization of their bodily experiences. By centring the voices and experiences of these women, this research seeks to challenge prevailing notions of disembodied and embodied violence, and shed light on the ways in which the digitization of their bodily experiences intersects with issues of gender, power, and technology. Furthermore, by incorporating technoscience theory, this research will critically analyze the ways in which digital technologies shape and mediate bodily experiences, as well as the potential implications for women's empowerment and agency in a technologically mediated world. Experience is being constructed in the digital space, and it is crucial to examine how this construction is influenced by gender dynamics and power structures. By employing a feminist lens, this paper will critically analyze the tensions and complexities surrounding the digitization of bodily experience, including issues such as consent, privacy, and the commodification of bodies.

From a critical feminist lens, the paper highlights the importance of experience as a very important form of knowledge production. The global fem-tech market is estimated to be worth \$60 billion by 2027. (FemTech Analytics) These menstrual apps, predict the date of ovulation, indicates the chance of you being pregnant and operationalizes on your sexual desires and choice. The hormonal medical indications quantify days and hours based upon vague information that we put in. It creates a sense of ownership of your body and invisibilizes the various ways in which these apps put an individual's data sovereignty into risk. The paper argues that the digitization of bodily experience, as exemplified by menstrual tracking apps, is not a neutral process but rather perpetuates gendered experiences that reflect societal gender patterns. This paper highlights the ways in which gender, in its intersections with other sociocultural power differentials and identity markers, is entangled in natural, medical and technical sciences as well as in the sociotechnical networks and practices of a globalized world. As the socio-cultural embeddedness of all scientific and technological theories and practices is a basic assumption among researchers within this field, the positivist distinction between scientific theories and their technological/practical applications is taken to be unsustainable. Digital health can have an enormous positive effect on women's wellbeing. However, lower access to technology, exclusion from leadership, and harmful societal norms currently impede digital health gender equity and risk increasing health inequities. As feminist digital health researchers, we must address these pitfalls. Using feminist intersectionality, we can understand how gender intersects with other factors such as caste, class, sexual orientation, income, and geographical location to create health inequalities. Using feminist intersectional lens, we can understand how to design and disseminate digital health to achieve health equity.

The more we use these applications that collect, track and monitor our health data, the more our bodies which are gendered gets assimilated into surveillance capitalism that invades intimacy. Users are rendered powerless, in the face of immense bio-power which these technologies possess. There are some important questions that this paper addresses-

- Does digitalization of health and tracking of bodily data encroach our bodily autonomy?
- Do the platform economies that are supported by algorithms help women to navigate the complexities of desire or consent?
- What do data practices of dominant MenstruApps suggest about data sovereignty?

Science and technology, has always maintained its objectivity and promises to be empirically driven and based on evidence. Although how it has grown within our lives and bodies is remarkable as our embodied self is completely guided by technology today. Health is no exception and this has been upheld by the feminist movement because their curious and critical questioning into this objectivity has

brought up many important questions of bodily autonomy and justice. Feminist who are speaking about science and technology have raised many epistemological questions of whose knowledge is important here. Within the framework of digitization, as users we put in our personal intimate data which is then being monitored and generalized. Digital technologies have made it possible to archive data and quantify embodied experiences of bodies. There is now much focus on the power of the vast data archives gathered by digital technologies, both to inform patients about their own bodies and health states and also to provide information to healthcare providers about the health states of populations and the use of healthcare. A specialized field of research, health informatics, is devoted to researching the design, development and application of such data-gathering systems in healthcare and for health policy purposes. These data can be employed for purposes such as health profiling for targeting treatment and illness prevention strategies. Thus, for example, in Australia some hospitals are trialing a digital data system, the Patient Admission and Prediction tool, that is designed to predict the days and time of day when demands on their emergency systems are likely to be greatest based on their electronic records. They are using these data to manage their staffing and other resources to ensure that patients' needs will be better and more quickly met and costs will be reduced (CSIRO).

As much as these technologies are used in health discourses, it is also used by people in their everyday life practices. It is interesting to view how these digital technologies now mitigate different experiences. Thirst, sleep, walking, menstruation, blood pressure and many such things that people experience as part of their health are guided by these technologies. They are tracked and monitored every minute. Therefore, questions of bodily autonomy and subjectivities arise here. We end up believing and acting according to these ideological doctrines of disembodied scientific objectivity (the phone, the app, the water alarms, the telemedicine systems). This reflects the scientific bias and makes us question about our own decisions and autonomy. In this digitized world, do we have bodily autonomy at all? The Feminist technoscience movement raises questions of how health and medicine reestablish their power through these digital technologies are Women's bodies are under double surveillance, (a) both through medical practices and (b) through digital technologies.

Platform companies are the most powerful transnational corporations, driven by algorithms that can be defined as certain mathematical instructions that process data, this runs solely on our data, the data that we put in based on our own bodies and experiences. These platforms or transnational companies use our data as their data. It is almost impossible for women to navigate the complex terrain of 'consent' which is often recommended as a solution in the data marketplace to make decisions about which data to share, with whom and for what. We are constantly clicking on the "agree with the terms and conditions" button which already involves our consent, which means that these apps are capable of mediating our consent. Post which, they ask for extremely private information based on our moods, sexual health, number of partners, nature of blood flow, severity of pain and discomfort, thirst etc. Many of these pieces of personal information have been found to be completely unnecessary for the informational service of predicting the period cycle of an individual user, or in terms of predicting health problems in individuals. Evidently, app providers are collecting user data with an eye on downstream data markets for secondary uses of such data, including targeted advertising and market research, and not just for app operation or customization of services. Our experiences of discomfort, pain, anger or hunger is down streamed and aggregated as anonymous data sets. The privacy settings hamper our right to anonymity leaving data subjects (us) unprotected. Although these platforms are able to accommodate diversity, it promotes stereotypical and problematic images of gender, sexuality, race and caste.

MenstruApps one of the most used Femtech based platform economies are an example of how Women's experiences get datafied. MyFlow, Clue, Period tracker and My Calendar are some of the platform

economies that archives women related bodily data about menstruation. The feminist movement has established how menstruation has been objectively studied within both a male gaze and through scientific theories of biological determinism. It is thereby interesting to view how such medical connotations of menstruation gets re-established through these platform economies. In Martin's view: "Menstruation not only carries with it the connotation of a productive system that has failed to produce, it also carries the idea out of production gone awry, making products of no use, not to specification, unsalable, wasted, scrap. However disgusting it may be, menstrual blood will come out. Production gone awry is also an image that fills us with dismay and horror." (Martin, 485-501)

Binaries of production and reproduction get reiterated when women feed in their data of monthly menstruation, however such data cannot encompass the varied experiences of women who have different ways of menstruating and different ways in which their bodies change during these days. The Platform economies are involved in collection, processing and third-party sharing of personal data. The question of data privacy of women using these apps is a matter of concern. It takes into account the fundamental human rights of women which are violated and the intimate spaces are invaded when gendered bodies are integrated into surveillance capitalism. "The privacy policies and practices of menstruapps tend to be vague, ineffectual, and akin to a contract between 'a lion and a sheep' as users are rendered powerless in the face of the immense biopower that menstruapps wield" (Charni,1-13) Due to users' helplessness in the face of menstruapps' and the enormous biopower they hold, their privacy policies and practices are typically ambiguous and ineffective. Enacting a situation of unrestrained data extraction, these expansive application consent agreements and privacy policies lack procedural safeguards for the data subject's rights to access, deletion, and portability, as well as purpose constraints of data usage in third-party data sharing arrangements.

Technoscience methodologies thereby must be used to analyse something as gendered as bodies and data, connecting it within the complex terrain of digital capitalist economies. These menstruapps demand blanket consent from consumers, they ask extremely basic questions for experiences so diverse and rich. This standardization of surveillance methods and ways of analysis makes these menstruapps and platform economies data oriented and working for establishing dominant governance. Technofeminist Donna Haraway studies women's bodies as constructed through technologies or Cyborgs (a combination of machine and organism).<sup>1</sup> The Femtech industry has created a space where cyborgs flourish through different couplings of organism and machine. With Artificial Intelligence, this coupling gets complex as the boundaries between how to distinguish between an organism and a machine gets difficult. With other technologies like virtual reality, the paradigmatic foundations of reality are replaced with technology. As cyborgs, women's bodies become algorithmic and networked bodies. Hence, our experiences and lived realities get mediated through machine learning systems. As digitally monitored networked bodies and as women who experience menstruation in varied ways, our bodies become vulnerable and inescapably fixed within quantified models.

Significant reading of the privacy policies<sup>2</sup> suggest that they highlight concerns about the lack of sufficient safeguards to protect users' personal data sovereignty. It points out issues related to users' control over their data sharing and how their data is processed once it becomes part of aggregated,

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<sup>1</sup> A cyborg is a cybernetic organism, a hybrid of machine and organism, a creature of social reality as well as a creature of fiction. Social reality is lived social relations, our most important political construction, a world changing fiction. (Haraway, 1991)

<sup>2</sup> <https://flo.health/privacy-policy>



anonymized datasets. Additionally, this paper criticizes the narrow interpretation of the right to privacy as merely the right to anonymity, which it argues fails to adequately protect individuals from profiling harms. My own experience of using the Application names as My Calendar<sup>3</sup> makes the entry of Period start date data and end data as mandatory, besides I am asked about my flow, my mood changes, anger levels, hunger levels, sex drive and sleep habits. Most of my responses emerge from real time prompt feelings and emotions and are deeply embedded in my experience of everyday. What it represents is how this personal information is converted into scales of measuring my biological process of menstruation through a medical lens. The privacy policies completely ignore these concerns and how it is related to my menstrual health. Feminist reading of these MenstruApps and platform economies suggest that we must urge to bring women at the centre of medical discourses to raise critical questions about the capitalist market that has made bodies into technologically deterministic models that generate data and feed the market with sensitive health information that becomes third-party database.

The next question this paper raises is that of Big data revolution and machine learning systems. The Femtech industry and its sectors emerged as a way to produce e-health measures that were designed for women only. It became an integral part of the the big data revolution and artificial intelligence which is now being considered as the fourth industrial revolution. The above-mentioned challenges with data and machine learning forge a threat to democracy and social justice. These machine learning systems promote binary thinking and within a feminist framework this binary re-establishes the heteronormative binary as well. Polarized business models are being constructed based on our experiences of health and our bodies are getting converted into datafied objects. This is in complete contrast to the women's conceptions and ideas of their own bodies which is emancipatory in nature. These machine learning systems produce binaries of bodies especially the MesntruApps which create the binary of a procreating body and a body that fails to do that.

These discussions must be validated within a digital democracy and a feminist consciousness. Only then can we move ahead and discuss women's bodies, data sovereignty and data privacy. The digitally induced capitalist ventures of the Femtech industry is an assemblage of Applications, medical devices, beauty products, cosmetic surgery clinics and many such initiatives whose consumers are only women. Women who belong to multiple identities are forced within the walls of affective economies that enforce upon our vulnerable bodies a refashioned objective bias. Additionally charged with masculine and medical biases. The question of women no just as data producers but active users of big data must be addressed. The machine learning systems promote binaries of menstruating v/s non menstruating bodies. Once it identifies the non-menstruating bodies and bodies that have medically defined abnormalities with menstruation it falls back on the medical economies. Medicine thereby becomes another sector that is interlinked with Big data. The data produced through women's bodies become algorithmic data sets for Platform economies which is designed by machine learning systems. The FemTech market, according to Frost & Sullivan<sup>4</sup>, is projected to reach a staggering \$50 billion by 2025. This upward trajectory highlights the increased recognition of women's health as a critical area of investment and innovation. The data is used to provide generative, predictive and diagnostic insights into women's health. Effective strategies are needed to protect the expansion of Femtech and gender-imbalanced data sources. "Most menstrual- tracking apps use hormone based models of the menstrual cycle, which break down the process into four primary phases. A visualization of this model almost always serves as the homepage for the app and is central to the data archive and analysis features. The

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<sup>3</sup> <https://simpleinnovation.us/my-calendar-period-tracker>

<sup>4</sup> <https://store.frost.com/medical-device-innovations-furthering-femtech.html>

four phases of the cycle are visually placed alongside self-tracking features to reinforce the perceived connection between sex hormones, menstrual cycle phases, and bodily experience” (Hennegan, 1-8).

Big data revolution and artificial intelligence instead of promoting women autonomy are instead involved in body alienation. Such machine learning technologies create varied inequalities and biased imagery of women. This paper explores the criticism surrounding menstrual technologies, focusing on the inaccuracy of prediction algorithms and the prevalence of pink interfaces and gendered language. While many critiques center on the targeting of straight women, the chapter delves into how self-tracking and data analytics in these technologies reinforce narratives of menstrual concealment and bodily alienation. By examining the interface aesthetics of apps like Flo and Clue, it illustrates how their design encourages the suppression of menstruation through euphemistic humor and imagery. While these apps aim to educate users about menstrual cycles and symptoms, they often rely on humorous and euphemistic icons to represent bodily processes deemed socially abject or disgusting. This perpetuates historical notions of menstruation as a taboo topic, reinforcing the idea that it should remain hidden or concealed. (Kressbach, 25-61)

### Conclusion:

The sheer scale of menstrual-health data archived by menstrual-tracking apps means that it could be used for future analysis. But to pursue these possibilities, major revisions must be made to the current design and data-collection features of these apps. The paper highlights how important it is to suggest strategies of enhancing privacy measures. The danger of menstrual tracking apps ability to gather demographic data to better target specific user groups. Presently, these apps typically only ask for age and sometimes location. However, collecting additional information like race, ethnicity, dietary habits, family medical history, and existing health conditions such as endometriosis could provide valuable insights into menstrual health trends. What is required is a feminist reimagining of privacy policies and app designs that promote experience sharing and in-depth rich insights about bodies. Yet, locating these discussions within the complex framework of digital capitalist economies is difficult but not impossible. Virtualization of bodies make material bodies with gendered experiences bounded by surveillance mechanisms.

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# **Understanding the link between Adolescent self-concept clarity and body appreciation, internalization of the thin ideal, media & peer pressure**

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**Abstract:**

*Adolescence represents a pivotal stage in the formation of our body image. Salient influences on body image may include social media and peer groups, who shape beliefs about the perceived 'ideal' body type. However, an individual's self-view or perception of their attributes (i.e. self-concept) plays an additional role in determining the extent of internalisation of the ideals presented by these external influences. Thus, this study aimed to study the link between self-concept clarity and body appreciation, internalisation of bodily standards of beauty, peer and media pressure in adolescents. The sample consisted of 130 participants aged 15-18 years. The Self-Concept Clarity scale (Campbell, 1996) was used to study the clarity of self-concept. The Body Appreciation Scale (BAS; Avalos, Tylka, & Wood-Barcalow, 2005) assessed individuals' attitudes towards their bodies. The Sociocultural Attitudes Towards Appearance Questionnaire- 4 was used to assess societal and interpersonal aspects of appearance ideals. To determine the significance of relationships between the variables a Correlation analysis (Pearson Product Moment Correlation) was used.*

*Keywords: Self-concept clarity, Internalisation, Media pressure, Peer pressure, Body Appreciation*

**Introduction**

Adolescence is frequently characterized by exposure to unsolicited comments about one's physique, originating from diverse sources such as family, friends, peers, and even strangers on social media. This occurrence is particularly notable in collectivist societies like India, where societal and cultural pressures play a significant role in shaping individuals' self-perception and body image (Rajagopalan & Shejwal, 2014; Rekha & Maran, 2012). Research suggests that despite attempts to disregard such remarks, adolescents often internalize them, resulting in alterations in their self-views. This internalization can manifest as negative body image, disordered eating patterns, and diminished self-esteem during this transitional phase of adolescence.

The American Psychological Association (APA) defines body image as the mental representation one forms of their body, encompassing both physical characteristics and attitudes toward those characteristics. There is a notable correlation between body dissatisfaction and active use of social media platforms such as Instagram, Facebook, and YouTube (Holmstrom, 2004), that we aim to explore. Scholars like Cash (2002) and Thompson et al. (1999) argue that body image is a multifaceted construct involving self-perceptions, attitudes, thoughts, feelings, and behaviors related to the body.

The pursuit of the thin ideal, often portrayed in the media, especially affects women and contributes to negative feelings about their bodies. Recent attention has shifted towards the concept of Body Appreciation. Tylka and Wood-Barcalow (2015a) define body appreciation as accepting, holding favorable opinions toward, and respecting the body while rejecting media-promoted appearance ideals. Research in this field indicates a negative correlation between body appreciation and the internalization of the thin-ideal body, suggesting that individuals with higher body appreciation are less prone to internalizing societal beauty standards (Jankauskiene et al., 2020).

This research seeks to delve into why some individuals are more susceptible to external influences than others, examining how adolescents can maintain a positive body image despite societal pressures. Additionally, the study investigates self-concept clarity as a variable, exploring whether a clearer understanding of oneself helps adolescents less internalize body-related notions. Roy Baumeister's definition of self-concept as an individual's beliefs about themselves, and self-concept clarity, defined as the clarity and confidence with which personal attributes are defined, forms the basis for investigating the impact of self-concept on body image.

Low self-concept clarity is associated with a lack of a clear sense of personal identity, potentially making individuals more susceptible to 'outside' influences. During adolescence, individuals explore different roles and identities, expanding their view of themselves into the world. Mass media plays a pivotal role in shaping their self-view, with contemporary images often blurring the lines between ideals and reality. Numerous editing techniques create illusions that may lead consumers to believe manipulated images are realistic representations. While more experimental evidence is needed, there's a consensus that interventions addressing body image and media literacy should account for the potential impact of social media.

Jones, Vigfusdottir, and Lee (2004) explored mediational relationships involving peer influence, (such as conversations with friends and peers, criticizing someone's appearance), and their impact on body dissatisfaction. Peers can reinforce the negative bodily views and the creation of 'appearance ideals'. Similarly, Paxton et al. (1999) found that friendship cliques share similar levels of body-image concern, dietary restraint, and use of weight-loss behaviors. Friendship cliques, particularly among adolescent girls, contribute to the internalization of societal standards of attractiveness. Teasing by peers, a common experience during childhood, has been linked to body image disturbance and serves as a catalyst for internalization.

This comprehensive review provides insights into the multifaceted nature of body image, influenced by diverse factors such as societal standards, peer influence, and media portrayal. The study aims to explore how adolescents can maintain a positive body image despite unrealistic societal influences being imposed on them, considering variables such as body appreciation and self-concept clarity. Understanding these dynamics is crucial for developing interventions that promote healthy body image during the vulnerable adolescent years.

### **Self-Concept Clarity and Internalisation**

Lenny Vartanian conducted a two-part study to investigate the factors influencing the internalization of societal standards of attractiveness. Building on Jennifer Campbell's proposition that individuals with low Self-concept clarity (SCC) are more susceptible to external influences (particularly societal beauty standards), Vartanian sought to explore these relationships further.

In the first part of the study, participants (322 individuals aged 14-59) engaged in an online survey encompassing scales related to Self-esteem, SCC, Body Image, Dieting concerns, Internalization, Dieting behaviors, and Demographics. The data collected over a year (2006-7) revealed a negative correlation between both self-esteem and SCC with the internalization of societal standards of attractiveness, specifically observed in women. However, in regression analyses, only self-concept emerged as a predictor of internalization, leading to the hypothesis that negative self-evaluation significantly impacts the degree of internalization. In the second part, a high correlation was observed between body weight contingency, body image, and dieting concerns, supporting the notion that low SCC increases susceptibility to external influence, leading to higher levels of body dissatisfaction.

A similar study conducted by Vartanian and Shanta Dey in Sydney, Australia, involved 278 undergraduate females. The study explored the relationships between self-concept clarity, internalization of the thin ideal, and body dissatisfaction. Results indicated negative correlations between thin-ideal internalization, body dissatisfaction, upward and downward appearance comparison, and self-concept. Higher self-concept clarity was associated with lower body dissatisfaction and thin-ideal internalization, reinforcing the research's premise that a stronger self-concept clarity reduces susceptibility to societal standards of attractiveness.

### **Self-Concept Clarity and Body Satisfaction**

Jennifer Campbell and her team conducted a thorough exploration of Self-Concept Clarity (SCC). Campbell proposed that individuals with low SCC are more susceptible to internalizing society-imposed stimuli. The study aimed to assess the measurement, cultural impact, and personality correlates, employing the Big Five Factor Model to thoroughly understand SCC. Spanning three parts administered over consecutive years, the first part of the study was focused on self-concept clarity's relationship with self-esteem, the Big Five measures (neuroticism, extraversion, agreeableness, openness to experience, and conscientiousness), self-consciousness, and social desirability. The sample comprised 471 undergraduate students from the University of British Columbia. Through test batteries like the Rosenberg Self-Esteem Scale and NEO Personality Inventory the study unveiled a robust positive correlation between SCC and self-esteem. Moreover, SCC exhibited a significant negative correlation with neuroticism, indicating that low SCC is associated with heightened neuroticism, potentially contributing to body dissatisfaction, the internalization of the thin ideal, and susceptibility to media influence.

Alan Roberts, Emily Good, Mark Allen, and Davina Robinson supported these findings by revealing a substantial negative correlation between neuroticism and body dissatisfaction, through their study. Involving 64 female undergraduate students, these studies employed measures like the Eating Disorder Inventory, Body Esteem Scale, and NEO-PI-R. The results indicated a strong association between neuroticism and body dissatisfaction, particularly influenced by exposure to social media visuals. Reinstating that individuals with high neurotic tendencies tend to feel more negatively about their bodies. Suggesting a link between higher neuroticism, lower SCC, and increased body dissatisfaction.

Building on this correlation another study by Payton Jayne Kelly from UNC, explored the mediating effects of appearance contingent self-worth, appearance-related social comparison, self-concept, body dissatisfaction, and disordered eating. The study targeted southeastern females from the age of 17-24. It involved survey links and consent forms mailed over a 14-month gap. Results indicated a robust negative correlation between body dissatisfaction and disordered eating. Furthermore, appearance contingent self-worth and appearance-related social comparison showed a strong positive correlation

with body dissatisfaction and disordered eating. This underscores that greater conformity to societal standards of beauty, as portrayed by media or peers, heightens dissatisfaction with one's body. However, individuals with a high self-concept may be immune to these detrimental effects. Recognizing the role of social media in impacting body appreciation, especially in women, our study aimed to investigate the link between self-concept clarity and media influence in Indian adolescents. This exploration seeks to provide valuable insights into how self-concept clarity may mitigate the impact of societal and media pressures on body image among Indian adolescents.

### **Self-Concept Clarity and Media Influence**

Teigan Safford Bush conducted a focused study on the 'self-presentation' of adolescent girls on visual social media platforms, particularly Instagram. Females aged 14-18 from Massey University, New Zealand, comprised the participant pool. By leveraging hashtags such as #thechangingfacesstudy on Instagram and Facebook, and using targeted advertisements; the study successfully gathered a large and diverse sample of its target audience i.e. adolescent girls. The study focused on analyzing Instagram likes, captions, photos, and postings. The results indicated that individuals with higher self-concept clarity tended to exhibit greater comfort within their bodies. The relationship between social comparison and self-concept clarity showed a negative direction, suggesting that those with higher self-concept clarity engaged in less social comparison. Notably, a robust negative correlation emerged between self-concept and social physique anxiety, indicating that individuals with greater self-concept clarity tended to worry less about their appearance on social media and in society at large. In a similar vein, Shanyan Lin and her colleagues explored the mediating role of self-concept clarity between passive social media use and subjective well-being. The study involved 328 Chinese-speaking adults aged 18-30. Participants completed scales measuring self-concept clarity, life satisfaction, and passive social network site use. As hypothesized, a strong negative correlation was observed between passive social networking site use and self-concept clarity, indicating that increased use of such sites was associated with lower self-concept clarity.

### **Self-Concept Clarity and Peer Influence**

Adolescents, spending a substantial amount of time with peers, are influenced significantly by their social environment. A study by Hemal Shroff and Kevin Thompson from the University of Florida aimed to replicate and test the Tripartite Influence Model, a theoretical framework examining the influences of family, peers, and media on body dissatisfaction and eating disturbances. The hypothesis posited that direct factors such as family, peers, and media, as well as mediating factors like internalization of societal beauty standards and appearance-related social comparison, contribute to greater dissatisfaction with one's body and eating disturbances. Additionally, the study explored an extended model suggesting that peer and social media influences play a more substantial role than parental influences.

Conducted in a school, the study involved 391 adolescent girls. The participants completed questionnaires, including the Tripartite Influence Scale, Sociocultural Internalization of Appearance Questionnaire, Revised Physical Appearance Scale, Eating Disorder Inventory (with body dissatisfaction, drive for thinness, and bulimia sub-scales), and Rosenberg Self-Esteem Inventory. The results expanded on the original 2004 study, revealing a significant correlation between peer and media influences on internalization. In a parallel study, Ian Hay and Adrian Ashman examined the impact of parental relationships, gender differences, and peer relationships on self-concept in 655 adolescents from Queensland, Australia. Using the Self-Description Questionnaire II, the researchers found that peer relations had a more substantial influence than anticipated. Both same-sex and opposite-sex

relations were more influential than parental influence for both males and females. This underscores the significance of a positive peer group in shaping an individual's self-concept, emphasizing that during adolescence, social influence shifts from parental to peer perspectives, a process known as individuation. These studies highlight the pivotal role of peer influence in shaping adolescents' self-concept and body image, reinforcing the idea that adolescence is a critical period for social influence and personality development.

Based on prior research (specify) and an understanding of the link between self-concept clarity, body image and sociocultural influence on adolescents; it has been hypothesized that,

1. There will be a negative correlation between self-concept clarity and internalization of societal standards of beauty (the thin ideal).
2. There will be a positive correlation between self-concept clarity and body appreciation
3. There will be a negative correlation between self-concept clarity and media influence.
4. There will be a negative correlation between self-concept clarity and peer influence.

## **Methodology**

### **Participants**

The sample consisted of 130 (45 boys and 85 girls) participants in the age group of 15-18 years of age, residing in Mumbai. The google form circulated, consisted of a consent form before proceeding with the variables of data collection.

### **Measures**

*Self- Concept Clarity Scale:* The Self- Concept Clarity scale, developed by Jennifer Campbell in 1996 (Campbell, 1996.), aims to measure the clarity in self-image. The scale consists of 12-items (1= strongly disagree and 5= strongly agree). Campbell checked the validity and reliability of the scale by dividing her study into three parts. Through the consistent patterns of correlation, it was inferred that the scale was deemed valid to study the self-concept of individuals (Campbell, 1996).

*Sociocultural Attitudes Towards Appearance Questionnaire- 4 (SATAQ- 4):* The SATAQ- 4 is a 22-item questionnaire developed in 2015 (Schaefer et al., 2015). The 5 sub- scales study: Internalisation- Thin/Low Body Fat, Internalisation- Muscular/Athletic, Pressures- Family, Peer and Media. The response scale ranges from 1 (definitely disagree) to 5 (definitely agree). A higher score on the scale indicates that the participant is influenced more than others. To test the validity of the scale, Schaefer and his colleagues administered a 22-item scale (after deleting the items that were found unfit). The scale demonstrated excellent model fit according to the comparative fit index (CFI) and CFAs from 3/4 coast samples. Thus, validating the scale's global usage.

*Body Appreciation Scale:* The Body Appreciation Scale is a 13-item scale, developed in 2005, measuring one's appreciation levels of their body (Avalos 2005.). All items were rated on a 5-point scale (1= never to 5=always). The average of all 13 item responses predicted body appreciation level. Higher scores indicate greater body appreciation. Laura Avalos and her colleagues divided their study into four parts to study the validity of the scale. The first and third part of the study indicated that BAS predicted unique variance of body appreciation in psychological well-being. Study 4 demonstrated the stability of the scores. Thus, internal consistency and reliability of the scale was validated.



**Procedure:** The questionnaire was administered online via social media to target participants (between the ages of 15-18). Before administering the survey, participant's consent was obtained, following which the above-mentioned scales were administered.

**Data Analysis:** The variables and demographic information of the sample was analyzed using Descriptive statistics. Pearson Product Moment Correlation Coefficient (Pearson  $r$ ) was used to study the relationship between the variables.

## Results

### Descriptive Statistics

As depicted in Table 1, the sample consists of 130 adolescents (45 boys and 85 girls) ages 15-18. Mean and Standard Deviation for self-concept Clarity and Internalisation of thin ideal.

**Table 1**

	N	Mean	Std. Deviation
Age	132	16.5	.89
Self-concept Clarity	132	34.31	8.59
Internalization	132	14.33	4.65
Body Appreciation	132	52.24	11.09
Media Influence	132	9.41	5.17
Peer Influence	132	7.23	3.66

### Mean and Standard Deviation scores of all participants for all variables.

The age of participants ranged from 15-18 years with the average age of participants in the sample being 16.5 years ( $M= 16.5$ ,  $SD= 0.89$ ). The mean score of self-concept clarity for all the participants was 34.31 ( $M= 34.3$ ,  $SD= 8.59$ ) indicating a moderately high clarity on self-concept. The 4 variables had the following mean score– self-concept Clarity being ( $M=34.31$ ,  $SD=8.59$ ), Internalisation of thin ideal was found to be ( $M=14.33$ ,  $SD= 4.65$ ), Body Appreciation was ( $M= 52.23$ ,  $SD= 11.08$ ), Media influence was found to be ( $M= 9.40$ ,  $SD= 5.17$ ) and Peer influence was ( $M= 7.23$ ,  $SD= 3.65$ ). This indicates that the average clarity in self-concept in the sample was moderately high, while internalization was on the lower side.

**Analysis of the Relationship between Self-concept Clarity and Internalization of the thin ideal.**

**Table 2**

		Self-concept Clarity	Internalization
Self-concept Clarity	Pearson Correlation	1	-.329**
	Sig. (2-tailed)		.000
	N	132	132
Internalization	Pearson Correlation	-.329**	1
	Sig. (2-tailed)	.000	
	N	132	132

\*\* . Correlation is significant at the 0.01 level (2-tailed).

**Correlation between Self-concept Clarity and Internalization of thin ideal**

Interpretations of the correlation between self-concept Clarity & Internalization of thin ideal as shown in table 2 reveals, as predicted there was a moderate negative relationship between these two variables ( $r_{(130)} = -0.33, p < 0.01$ ) which was found to be significant at 0.01 level.

**Analysis of the Relationship between Self-concept Clarity and Body Appreciation.**

**Table 3**

		Self-concept Clarity	Body Appreciation
Self-concept Clarity	Pearson Correlation	1	.401**
	Sig. (2-tailed)		.000
	N	132	132
Body Appreciation	Pearson Correlation	.401**	1
	Sig. (2-tailed)	.000	
	N	132	132

\*\* . Correlation is significant at the 0.01 level (2-tailed).

**Correlation between Self-concept Clarity and Body Appreciation.**

Interpretations of the correlation between Self-concept Clarity and Body Appreciation as shown in table 3 reveals, as predicted there was a moderate positive relationship between these two variables ( $r_{(130)} = 0.401, p < 0.01$ ) which was found to be significant at 0.01 level.

**Analysis of the Relationship between Self-concept Clarity and Media influence.**

**Table 4**

		Self- concept Clarity	Media Influenc e
Self- concept Clarity	Pearson Correlation	1	-.332**
	Sig. (2- tailed)		.000
	N	132	132
Media Influence	Pearson Correlation	-.332**	1
	Sig. (2- tailed)	.000	
	N	132	132

\*\* . Correlation is significant at the 0.01 level (2-tailed).

**Correlation between Self-concept Clarity and Media Influence**

Interpretations of the correlation between Self-concept Clarity & Media influence shown in table 4 reveals, as predicted there was a moderate negative relationship between these two variables ( $r_{(130)} = -0.33, p < 0.01$ ) which was found to be significant at 0.01 level.

**Analysis of the Relationship between self-concept Clarity and Peer influence.**

**Table 5**

		Self- concept Clarity	Peer Influence
Self- concept Clarity	Pearson Correlation	1	-.393**
	Sig. (2- tailed)		.000
	N	132	132
Peer Influence	Pearson Correlation	-.393**	1
	Sig. (2- tailed)	.000	
	N	132	132

\*\* . Correlation is significant at the 0.01 level (2-tailed).

**Correlation between Self-concept Clarity and Peer Influence.**

Interpretations of the correlation between Self-concept Clarity and Peer Influence as shown in table 5 reveals, as predicted there was a moderate negative relationship between these two variables ( $r_{(130)} = -0.39, p < 0.01$ ) which was found to be significant at 0.01 level.

**Conclusion**

The outcomes of the current investigation substantiate the presence of correlations between self-concept clarity, body image, sociocultural influence, and the internalization of the thin ideal among adolescents. The initial hypothesis, positing a negative correlation between self-concept clarity and the internalization of the thin ideal, aligns with the observed moderate negative correlation. This aligns with the research of Lenny Vartanian (2009) and Vartanian and Shanta Dey (2013), suggesting that adolescents with a more distinct sense of self are less prone to internalize societal beauty standards and conform to them.

The second hypothesis anticipates a positive correlation between self-concept clarity and body appreciation, a relationship supported by the research findings. Studies by Carter & Vartanian (2022), Campbell (1996), Roberts and Good (2010), Campbell, J. (1996), and Kelly, P. (2022) corroborate this hypothesis. A considerable explanation for this association may be that adolescents with diminished clarity of their self-concept are more likely to internalize societal beauty standards, potentially resulting in body dissatisfaction (Vartanian, Foreich & Smyth, 2016).

The third hypothesis forecasts a negative correlation between self-concept clarity and media influence, and the research outcomes are in par. Consistency is noted with findings from Stafford-Bush (2017) and Lin & Liu (2021). Adolescents with a less clear sense of self are more susceptible to influence by idealized body images on media platforms like Instagram and Snapchat. This susceptibility may also hinge on the time spent and activity status of adolescents on these platforms (Lin & Liu, 2021).

Finally, the last hypothesis predicts a negative correlation between self-concept clarity and peer influence, and the results indeed demonstrate this. Findings from C.L & K. A (1993) and Levy & Garandeanu (2019) support the notion that adolescents with higher self-concept clarity are less inclined to be influenced by their peers.

Conclusively, all findings affirm the hypothesized relationships. The study suggests that adolescents should engage in activities fostering self-awareness, particularly during this critical phase of self-discovery and increased interaction beyond familial ties. Concepts like body-love and self-love should be imparted to aid in building a positive self-concept. Given that educational institutions serve as frequent arenas for social interaction, the paper recommends implementing measures such as lectures and workshops. Additionally, providing school counseling services, regular mental health check-ups, and other supportive resources can contribute to the overall well-being of adolescents.

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*Understanding the link between Adolescent self-concept clarity and body appreciation, internalization of the thin ideal, media & peer pressure*

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## **Complexities of the Displaced Female Space in Iran: *Persepolis* (2007) and *Reading Lolita in Tehran* (2003).**

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### **Abstract:**

*Female memoirs are important sites of not private spaces but also accounts of resistance against totalitarian regimes. Themes of loss, silencing of voices intersect with transgressive resistance to socio-political and religious restrictions. This paper negotiates similar themes in Satrapi's *Persepolis* (2000-2003, books and 2007 animation film) and Nafisi's *Reading Lolita in Tehran* (2003), delving into the exploration of displaced female agency within the authoritarian landscape of Iran. It examines the protagonists of the respective texts using the genre of memoir as a means to recover and record female voices and reclaim agency. It also attempts a critical focus on the nexus between gendered space and spatially constructed gender identities.*

*Keywords: Memoir, life writing, graphic novel, trauma and resistance, religious ideology and gender*

### **Introduction**

Totalitarian regimes, driven by an ardent desire for absolute control, intricately dictate various facets of citizens' lives, particularly concerning women's bodies, fertility, and demographic patterns. Following the 1979 Islamic Revolution in Iran, political transformations have been intricately entwined with regulations dictating women's attire, sexual behavior, public comportment, and reproductive autonomy. These mandates not only impose severe constraints but also function as mechanisms to reflect and perpetuate entrenched political ideologies. Amidst such regulations, the question of displaced female space in totalitarian Iran emerges, highlighting the complex interplay between state control and women's agency within a repressive regime.

This paper attempts to engage with the profound intricacies woven into the fabric of Satrapi's *Persepolis* (2000-2003, books and 2007 animation film) and Nafisi's *Reading Lolita in Tehran* (2003), delving into the exploration of displaced female agency within the authoritarian landscape of Iran. The objective is to untangle the myriad layers that intricately complicate and challenge conventional dichotomies. By immersing into these narratives, particular attention is paid to the nuanced construction of female space and its role as both a site of empowerment and a layer of oppression. Judith Butler in *Gender Trouble*, suggests a link between 'Gender and Space'. Feminist spatial readings propose that space itself can offer resistance to gender hierarchies (22). A critical focus on the nexus between gendered space and spatially constructed gender identities might offer a promising approach for alternative gender configurations (Rose, 432). Through this lens, the paper seeks to illuminate the intricate dynamics at play, shedding light on the multifaceted ways in which women navigate and negotiate their existence within the confines of a repressive regime.

The history of feminism and women's movements is neither new nor unheard of in Iran. The feminist discourse in Iran has historically been split along ideological lines between left-secular and religious

feminisms. “The woman question” has a long history and even now is the burning issue in Iran, where feminists are demanding their fair share of justice and rights in a fundamentalist state (Paidar, 32). Because both gender and space, as social constructs, not only share common traits but are also used to reinforce each other, feminist spatial critique initially focused on patriarchal spatialization, specifically the power hierarchies that are manifest in and strengthened through human interactions with space. They examined, for example, the ways in which domestic and public spaces are gendered, enabling agency for one gender while limiting it for the other. (Massey, 54)

Negar Mottahedeh notes that “the female body was a pivot in Iran’s historical transition to modernity” and that “women’s bodies have long been politically charged symbols within Iran’s national history” (4). In *Persepolis* and *Reading Lolita in Tehran*, the literary tapestry intricately woven by Marjane Satrapi and Azar Nafisi invites readers into the clandestine corridors of female existence within totalitarian landscapes. Through Satrapi's poignant graphic memoir and Nafisi's lyrical narrative, the delicate dance of women amidst the oppressive rhythms of societal constraints is illuminated with profound elegance. These works unfurl a rich tableau of feminine resilience and ingenuity, portraying the protagonists as intrepid voyagers navigating the treacherous seas of political upheaval and cultural repression. In their exploration, Satrapi and Nafisi artfully depict the subtle interplay of power dynamics, offering a profound meditation on the indomitable spirit of womanhood amidst the shadows of authoritarian rule.

*Persepolis: The Story of a Childhood* and its sequel *Persepolis 2: The Story of a Return* (2000-2003) stand as Marjane Satrapi's celebrated autobiographical works, presented in the form of bandes dessinées, (French comics). These two volumes encapsulate Satrapi's coming-of-age journey against the backdrop of the 1979 Iranian Revolution. Through her personal narrative, she delves into poignant reflections on politics, religion, and culture, offering readers a profound insight into the complexities of Iranian society during tumultuous times. In 2007, Marjane Satrapi collaborated with Vincent Paronnaud to adapt her compelling graphic novels into the animated film with the same name, ‘*Persepolis*’. Through the medium of 2-D black-and-white animation and the French voice-over and the complete cast is of French origin, the directors skillfully bring Satrapi's autobiographical story to life on the screen.

In the film, through the lens of young protagonist Marjane and her Marxist family, the memoir offers a fresh perspective on Muslim women, depicting their struggle for public presence amidst political turmoil. The film documents Iran's transformation from liberal modernity to rigid conservatism, especially on women. The opening airport restroom scene is a masterclass in cinematography, expertly capturing Marjane's internal conflict and the external judgments she faces. As Marjane stands before a vast mirror fixing her veil as she sets on to board the flight to Tehran, the mirror symbolizes reflection and introspection. The shift from a close-up of Marjane to a wide-angle shot highlights the contrast between her traditionalist perspective and the modernity represented by the woman beside her. In the film, mirrors serve as a powerful motif, reflecting the characters' inner thoughts and societal pressures. Marjane, clad in a full-covering red coat, pale face and a veil, symbolizes traditionalist perspectives and religious adherence. In contrast, the woman, with her uncovered hair, bright makeup and revealing attire, represents modernity and Western influence. The woman's reaction to Marjane's appearance—a fleeting glance of contempt—highlights the societal judgments and prejudices faced by Marjane. The meticulous mise-en-scene captures subtle facial expressions, while ambient sounds immerse the audience in the bustling atmosphere. Through nuanced cinematography and layered symbolism, the scene sets the stage for Marjane's “struggle between tradition and modernity” (Rose, 438), echoing the theme of displacement of the female space in the film.

In the graphic novels, Marjane navigates gender-segregated spaces, such as schools and public transportation, which reinforce traditional gender roles and limit women's freedom of movement. The enforced separation of men and women in public spaces serves as a mechanism of control, further



marginalizing women within society. Marjane's bedroom becomes a private sanctuary where she can freely express herself through her drawings and writing. In a society where women's actions are closely monitored, Satrapi uses this space to explore her identity and assert her individuality away from the scrutiny of others. In the graphic novels, Taji orchestrates a transformative gathering in their domicile, subverting entrenched societal dictates. Discarding conventional attire for contemporary garments—jeans, T-shirts, and makeup—the women assert their autonomy against the regime's sartorial strictures. Within the sanctum of their domestic abode, an aura of emancipation permeates, sharply juxtaposed with the conformity enforced in the public domain. Assembled in the living room or kitchen, the ambiance reverberates with sororal solidarity, punctuated by animated discourse and unrestrained mirth, offering a sanctuary from patriarchal surveillance. Here, they luxuriate in the luxury of feminine self-expression, challenging patriarchal paradigms with an air of nonchalance and unbridled gestures. Despite external pressures, they subtly wield feminine agency over their bodies and identities within the confines of their domicile. Through this clandestine gathering, Taji and her female kindred fashion a sophisticated bastion of feminist resistance, discovering solace and empowerment amidst the comforting familiarity of home. It highlights the “complex negotiation of identity and societal expectations faced by women in Iranian society” (Hoodfar, 6). “Persepolis gains cultural capital because it is an autobiography that discusses the unveiling of the displaced women's life in Iran and it becomes marketable in the West by the curiosity about the exotic and the possibility of having access to it” (Naghibi and O'Malley, 241).

Despite embracing Westernization, Marjane feels marginalized in Vienna and experiences migrant nostalgia for her homeland. However, upon returning to Iran, she confronts a totalitarian regime that seeks to erase women's individual and complex identities. Marjane embodies the struggle of the “third-world woman” (Spivak, 265) caught between tradition and modernization, yet her individuality resists being subsumed by patriarchy and imperialism. Through her journey, Satrapi breaks down the barriers imposed by both the Middle East and Western societies, asserting her autonomy and defying attempts to erase her identity. In conclusion, the film resonates with concerns of a young girl navigating political, social, religious and physical changes from a cosmopolitan state to a totalitarian regime. In both the film and the graphic novel, Satrapi intricately dissects the labyrinthine nuances of female autonomy across diverse contexts, endowing the female experience within a totalitarian regime with profound resonance among women globally. The texts provide a meticulous examination of the multifaceted nature of female subjugation, transcending mere constraints on sexual orientation, appearance, and compliance with draconian regulations imposed by authoritarian regimes, but also through the spaces they inhabit.

The novel *Reading Lolita in Tehran* (2003) encapsulates the similar controversy surrounding female spaces within the context of the memoir. By intertwining the act of reading Vladimir Nabokov's *Lolita* (1955), a novel notorious for its controversial themes of sexual exploitation and female objectification, with the setting of Tehran, a city marked by strict societal norms and oppressive regimes, Azar Nafisi illuminates the complex dynamics of female autonomy and resistance. In Tehran, public spaces are tightly regulated, and women face numerous obstacles to their autonomy and self-expression. However, within the private space of Nafisi's home, women find refuge and solidarity, forming a community united by their shared love of literature and their determination to resist the constraints of their reality. In the novel Nafisi “went against the grain of all totalitarian perspectives” (Kandiyoti, 376). It characterizes the Shah's rule as carrying “vestiges of totalitarianism and tyranny,” suggesting that he fell short of full-fledged totalitarianism and was thus less objectionable. This emphasis on the interplay between temporal and spatial contexts infuses the novel with a profound depth, elucidating why the work transcends “a mere literary analysis of Nabokov's *Lolita* to become a nuanced exploration of the symbiotic relationship between literature and its surroundings” (Levinson, 43).

The setting in which Nafisi operates in her story, as a Professor of English literature during a revolution in opposition to secular western values, exerts tremendous influence over the books she reads with her

class. During a time of nightly news broadcasts of show trials, prisoner confessions, and reports of executions, Nafisi decides to assign *The Great Gatsby* rather than her original selection of writings by proletarian writer Mike Gold. When her more Marxist students condemn Gatsby (the character) for his opulence and the Islamists for his adultery, she puts the book on trial before the class. It is Nafisi's contention that Gatsby becomes a subversive book for her students precisely because it focuses unapologetically on a single individual's dashed dream at a time when competing ideologies in Iran—Marxism and Islamism—would usurp all that is private and individual. On an American campus, Gatsby would hardly be a controversial book, but in Iran at this time, F. Scott Fitzgerald's classic proves to be provocative (Nafisi, 132). And just as Nafisi uses Gatsby to explore, among other things, the tension between art and ideology, she reads *Pride and Prejudice* with courtship in Iran amidst diminishing women's rights in mind. She also uses the novel to discuss power relations as she believes Jane Austen sees them, saying that negative characters never truly hear or are influenced by the people around them; they lack empathy and democratic values (Nafisi, 329).

Similarly, she reads *Lolita* with an eye toward the young women of her book discussion group, who, like Nabokov's love interest, are powerless in the face of male authority. Lolita's (character) tragedy, then, is "not the rape of a twelve-year-old by a dirty old man but the confiscation of one individual's life by another" (Nafisi, 33). Lolita's dreams for an ordinary life, like the ordinary hopes of the young Iranian women who felt trapped by post-revolutionary restrictions, are subordinated to the demand that they, like Lolita, enact someone else's fantasy, thus becoming "figments of someone else's imagination" (Mohanty, 25). Precisely how women were subordinated to enact male Islamist fantasy is by now well known, of course, beginning with strict dress restrictions to conceal body and hair; laws forbidding unmarried men and women to consort publicly; the institution of other Sharia codes limiting women's rights in divorce, inheritance, rape prosecution, and child custody; and extreme punishments, such as stoning, for women convicted of adultery and other perceived sexual offenses.

An analysis of Satrapi's and Nafisi's texts reveals the intricacy and the entrenched issue of female displacement and the feeling of belonging nowhere due to the oppressive regimes in Iran. The surge of women's memoirs, especially among Iranian writers, arises from both personal expression and market demands post-9/11. In Iran, where socio-political constraints limit literary avenues, memoirs become vital platforms for navigating censorship and reaching wider audiences. The ban on the film and the novels in Iran underscores the irony of censorship, given its critique of political and societal norms. The government's control reflects a desire to maintain a unified narrative, suppressing dissenting voices. Despite bans, the film and novels persist underground, symbolizing resistance to censorship and the pursuit of alternative perspectives. The reception of these texts across the world, especially in Iran is perceived as the testament for the subjugated voices of women in Iran.

An analysis of Satrapi and Nafisi's texts encapsulate the central inquiry raised in this paper; the displacement of the female space in Iran. The authors of these texts offer a poignant portrayal of the displacement of female presence within Iran, as they write about their experiences in the totalitarian regime from a displaced space. Their works serve as a compelling exploration of the juxtaposition between the liberating creative environment outside Iran and the oppressive realities within the authoritarian regime they scrutinize. Satrapi and Nafisi eloquently reclaim their voices, providing profound testimonies to the resilience and multifaceted experiences of women in Iran. *Reading Lolita in Tehran* focuses on intellectual liberation through literature and the reclaiming of physical space, while *Persepolis* offers a more personal account of resilience and defiance in the face of societal constraints. The texts are seminal memoirs that intricately depict the complexities of women's life under oppressive regimes in Iran. As they were crafted during tumultuous periods, these narratives delicately retrieve the muted voices of several women, offering poignant reflections with the wisdom of hindsight and the tenacity of resistance. These examples showcase how both books and the film depict the ways in which women in Iran navigate and resist patriarchal oppression through the appropriation of physical and metaphorical spaces. Whether it's through clandestine book clubs, classroom discussions, street

protests, or personal sanctuaries, women in both narratives assert their agency and challenge societal norms in their quest for autonomy and freedom.

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# Caste based Hate Speech in Digital Spaces: A Study of Select Social Media Platforms

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## **Abstract:**

*This paper is an attempt to comprehend the contradictions within the digital space. While it enables access and the freedom to post views and opinions, it can also be a highly toxic and disabling space especially for those on the margins. This paper emanates from my doctoral study on casteism in the digital space. Rapid Digitalisation has brought approximately five billion people on Social Media Platforms (SMP), transforming these platforms into the “Digital Town Square of the 21st Century.” They provide a platform for free speech and digital cultural exchanges across hitherto unconnected or loosely connected regions. However, just like the Offline spaces the digital spaces also face multiple challenges and spreading hate speech is among the prominent ones. While religious and ethnic hate speech has been studied extensively, caste-based hate speech has not been explored in detail. This paper will try to review the latest literature on caste-based hate speech on SMP’s, the different manifestations of it, its impact, the steps taken by these platforms to prevent such incidents and more importantly, additional steps that can be taken to ensure that the “Digital Town Square is inclusive, sensitive and welcoming space for all the digital citizenry, especially the marginalised communities to digitally cohabit”.*

*Keywords Caste Online; Digital Casteism; Digital Discrimination; Hate Speech.*

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## **Introduction**

“The Caste system is not a physical object like a wall of bricks or a line of barbed wire which prevents the Hindus from co-mingling and hence which needs to be pulled down. Caste is a notion; it is a state of mind. It is a disease of the Mind”.

- Dr. B. R. Ambedkar’s Book: “*Annihilation of Caste.*”

If seen through the lens of equality and humane treatment of all as given by Dr. Ambedkar, a recent TikTok Video of a Tamil dominant caste youth who is found to be openly saying “Fight us if you are a real man, you Dalit dogs. You bastards are worthless in front of us, we will butcher you lowlives” is nothing short of provocation for genocide. In another incident when a member from Dalit community known to work with leather products said he wanted to start his own online business he was attacked by saying “*You Muchir Chele*’ (son of a cobbler), how dare you want to do business, you’d better mend shoes on the street” highlights the still persistent discriminatory behaviour and strengthening of caste-based division of labour in 21st century digitalised world (International Dalit Solidarity Network & Shanmugavelan, 2021).

There are multiple such videos, short clips, articles, tweets, reels, etc of such ghastly incitement for caste-based hatred being propagated in digital spaces and social media platforms. As India completed its 75 years of independence and is marching towards the “Amrit Kaal”, the rising incidences of hate speech against the marginalised sections like Dalits, Adivasis, Bahujan’s (DBA), women, religious and sexual minorities, etc raises many important questions. Questions like what constitutes hate speech and how it is different from free speech? What are the reasons for rising hate speech in general and caste-based hate speech in particular? What is the role of social media in propagating hatred? What are the different manifestations of caste-based hate speech in digital spaces in general and social media platforms (henceforth SMP) in particular? What is the impact of this hatred on the individual, community, and society in general? Have the SMP taken any measures? What has the government, and international organisations done about it?

This research paper will try to engage with these questions using relevant literature and make informed suggestions on the steps that can be taken to ensure that the Digital Spaces and SMP become more supportive and sensitive towards the marginalised sections so that the benefits of digitalisation can be reaped by the individuals and communities standing at the bottom of the pyramid.

### **Digitalization and rise of social media**

The 21st Century brought with itself the information and technology revolution across the globe including India. This can be understood from the fact that globally there are 5.6 billion Unique Mobile Phone subscribers and 5.30 billion people with internet connection in October 2023, constituting 65.7% of the Global population and with 4.95 billion active social media users as stated in the “October Digital 2023: Global Overview Report” on [www.dataportal.com](http://www.dataportal.com). This global digital revolution also gets reflected in India as we have 1.10 Billion Mobile phone connections which is 77% of the nation’s population and has 692 Million Internet users in January 2023 with the median mobile internet connection speed in India increased by 3.87 Mbps (+ 26.9 %) in the twelve months to the start of 2023 according to Digital India: 2023 Report.

The massive penetration of cost-effective smartphones and better internet connection provided a fertile ground for the expansion of social media platforms not only globally but also in India. SMP have been defined in various ways but one of the most accepted definitions of social media was given by Boyd and Ellison (2007). They defined Social network sites as web-based services that allow individuals to (a) construct a public or semi-public profile within a bounded system, (b) articulate a list of other users with whom they share a connection, and (c) view and traverse their list of connections and those made by others within the system. Further, Kietzmann et al.(2011) gave the functional building blocks of social media in its definition. It defines social media as a “honeycomb of seven functional building blocks: identity, conversations, sharing, presence, relationships, reputation, and groups.” For most of the leading SMP, India is their biggest market and their biggest Cash Cow. In the same “Digital India: 2023 Report”, it was stated that Facebook has 316 million users in India, WhatsApp has approximately 500 million users in India, Instagram has 229.6 million users in India, and YouTube has 497 million users.

### **Social media and the rise of Digital Dalits**

Indian society, especially the Hindu society is divided into scripture-based fourfold varnas, at birth, into a hierarchy consisting of Brahmins, Kshatriyas, Vaishyas, and Shudras. It is based on the twin concepts of “purity and pollution.” In the latter half of the Vedic age the varna system further broke into many castes and sub-castes and got consolidated due to lack of mobility, lack of opportunities to change the occupation, strict endogamous marriages etc. The Dalits or the Untouchables, are outside this

classification and are expected to do the cleaning, sanitation, manual scavenging, which is inhuman, to say the least. (Acharya)

Despite being one of the most marginalised communities in India facing inhumane conditions there is extremely limited exposure on these topics in the mainstream media as the traditional institutional media is dominated by the dominant castes and the upper class of the society. This is evident from a study done by Oxfam India, in association with Newslandry, (2019) which prepared a report titled ‘Who Tells Our Stories Matters: Representation of Marginalised Caste Groups in Indian Newsrooms.’ The report studied all major Hindi and English news platforms — newspapers, television channels, news websites and YouTube channels. The report said that among journalists writing for English newspapers, only 5 per cent belong to Dalit and tribal communities. The figure stands at 10 per cent for Hindi newspapers. Twelve leading magazines were also assessed as part of the study. It was revealed that of the 972 stories published on its cover pages, only ten were related to caste — just 1 per cent (Oxfam India & Newslandry, 2019). This has made many scholars to believe that many issues, challenges and demands of the marginalised communities are not getting due attention in the media, both print and television media space because the dominant groups are controlling them.

But with the rise of SMP, and its tremendous reach in the society, SMP’s have created and opened up spaces where the most marginalised sections can speak up freely and express their views on any topic almost as immediately as it happens turning SMP into the Digital Town Square giving a sense of confidence, especially amongst the oppressed sections of the world like the Minorities, Dalits, Bahujan’s, Adivasis, Women’s etc. Further the availability of social media websites in multiple languages like Facebook is available in 11 Indian languages, Twitter in 6 Indian languages etc bringing many people especially from the marginalised communities on the SMP’s.

This is evident in the rise of many Dalit blogs, platforms, pages, channels etc like Round Table India, Dalit Dastak, Dalit History Month, Velivada, Dalit Camera, Dr BR Ambedkar’s Caravan, The Dalit Voice etc strive to keep the anti-caste discourse alive. Dalit women have launched forums like Dalit Diva (2016), Savari (2016), and Dalit Women Fight (2017). They oppose both caste-based oppression and patriarchal structure within the subaltern fold. This has led to emergence of “Digital Dalits” a term used for these activists (Nayar 2011). These are urban professionals and educated middle class who could be easily mobilised through social media. Thus, Thirumal and Tartakov say “a fraction of Dalit middle class function as interlocutors in virtual agitations.” Also, the rise of Digital Dalits can be seen as “Counter Publics” (Fraser and Warner) who are opposing the hegemonic tendencies in the digital spaces. Lakshmi (2016) has argued that these hashtag - led counter narrative represent “140 - character war on caste system,” comparing the Dalit Twitter generation with the “Black Twitter” users in the United States. The use of hashtag activism was evident during multiple incidents like the #JusticeForRohit, #PostCardtoPresident, #DalitLivesMatter, Hathras gangrape, etc to name a few. Despite the rise of digital Dalits and positive influence of SMP’s, the challenges faced by the community has also increased manifold which is explained in detail in the following part.

### **Rise of Caste based Hate speech**

Hate Speech has been defined differently at various places. The United Nations Strategy and Plan of Action on Hate Speech (2020) defines hate speech as “any kind of communication in speech, writing or behaviour, that attacks or uses pejorative or discriminatory language with reference to a person or a group based on religions, ethnicity, nationality, race, colour, descent, gender or other identity factor.” Though caste is not mentioned directly, the term ‘descent’ includes caste and can be applied to caste-hate speech. Similarly, the EU 2019 guidelines address caste-based discrimination under the term

descent stating that “‘descent’ does not solely refer to ‘race’”. The UN Committee on the Elimination of Racial Discrimination (CERD) published its General Recommendation no 29 on Descent-based Discrimination it includes reference to mass media and the internet.

The Indian Constitution provides for Freedom of Speech and Expression under Article 19(1)(a) along with certain restrictions on it. The Section 153(a) and Section 153(b) of the Indian Penal Code (IPC) prohibits and punishes deliberate spreading of enmity amongst diverse groups up to 3 years of imprisonment. The Honourable Supreme Court in the *Amish Devgan vs Union of India Case (2020)* has differentiated between free speech and hate speech, thus providing the legal and judicial legitimacy for the distinction.

Despite these legal provisions there is a tremendous rise in religious, caste based, gender-based hate speech not only in the offline spaces but also in the online spaces. Caste based hate speech has been defined by IDSN as “any communication form such as speech, writing, behaviours, codes, signs, or memes that manifest hierarchies, invoke humiliation, serve to dehumanise, incite discrimination, degrade self-worth or perpetuate discrimination and are often the sources of physical, mental or material violence to a person or a group based on caste identity” (International Dalit Solidarity Network & Shanmugavelan, 2021). Further the different manifestations of online caste-based hate speech with multiple examples have been discussed by organisations like IDSN, Centre for Internet and Society (Centre for Internet and Society et al., 2021, pg.14-20) and various scholars and activists in the recent past, some of which are explained below:

### **1) Discriminatory Speech and Trolling:**

It is used to instil “inferiority” amongst the marginalised communities. The 2019 report of Equality Labs suggests that 40% of all casteist hate speech they encountered on Facebook was regarding reservation. Trolling by calling these students as “Quota Valas,” “Reservation Valas.” Another term “Bhimte” is used to insult Dalits as they greet each other as “Jai Bheem.” “Go back to the jungle, you don’t belong here” etc. are few of the regular trolling terms many of the Dalits must encounter. “OK Bhimer”- a new derogatory reference to cancel followers of the philosopher and Dalit leader Bhimrao Ambedkar for anti-caste tweets. This “digital harassment” has resulted in suicides of many Dalit students like Rohit Vemula a PhD Student at Central Hyderabad University, Payal Tadvi a Medical Student at Nair College Mumbai, and the recent one of Darshan Solanki a IIT Bombay Student to name a few.

### **2) Indirect Discrimination:**

Posting and propagating Dalit icons' views, anniversary celebration greetings on their channels, status, reels etc is seen with contempt and “unwanted hostility.” This often leads to “no likes, no comment, no subscription” by many of the upper caste friends, colleagues, neighbours who till now were always liking and commenting on your posts. This “Digital Social Distancing” leads to “Digital Social Isolation” and limits the exchanges between the communities, which further leads to formation of “Digital Ghettos” where only Dalits, Bahujan’s, Adivasis cohabit.

### **3) Incitement of hatred and violence:**

Social media platforms are filled with YouTube shorts, Instagram and TikTok reels, tweets, pages, comments etc which openly suggest causing physical harm, kill, rape Dalit women etc. For example, recently a Tamil brahmin youth in his TikTok video is found to be saying that “fight us you Dalit dogs. You bastards are useless. We will butcher you lowlives.” Similarly, an Upper Caste Marathi girl in one of her videos was found to be saying and asking her fellow community members to go and cause

violence to the Dalits and show them their proper place. Another gut-wrenching incident of Devji Maheswari, a Dalit lawyer activist who lived in Mumbai, who criticised atrocities against Dalits, his upper caste brahmin friend Bharat Raval from the same village warned not to do so. When Devji still continued to post on the topic, Raval travelled from the village to Mumbai and killed Devji.

#### **4) Casteist matrimonial websites:**

Shaadi.com is a famous matrimonial website in India, many matches for a brahmin profile do not generate Dalit profiles. Thus, avoiding potential inter caste marriages and further strengthening Caste Walls.

#### **5) Lack of digital recognition:**

Before the takeover by Elon Musk, the allocation of “Blue tick” verification was done by Twitter instead of being a paid service. Cases of denial to blue tick to Dalit activists, scholars with significant followers were observed. E.g.: Ass. Prof Mandal, Pa Ranjith even with significant followers was not given the blue tick verification which led to Digital protest and criticism with twitter being called as “Blue Janeudhari” (The Quint, 2019).

#### **6) Demonetisation of Dalit Influencers:**

The ban imposed on TikTok, which was a mode of earning for many in the rural areas, especially the marginalised communities, they had to take refuge on “Instagram” which is dominated by the “Urban, Elite and Upper caste” groups. These “Digital refugees” were not readily accepted on the platform, instead were bullied, called names, asked to “go back to the jungles” etc. Destroying the confidence of many young digital content creators. Renowned digital Dalit activist Pardeep Attri, who started Velivada and Ambedkar Caravan (@AmbedkarCaravan), and has more than 90k+ followers across platforms says many research scholars, thinkers, community people, etc do not discuss on the topic because they are afraid that it will lead to isolation, backlash. Many influencers do not openly take a stand because they might not get advertisement from companies, employers and colleagues might investigate their social media profiles and it might lead to job loss or no/delayed promotion.

Similarly, Siddhesh Gautam, who goes by the handle @bakeryprasad on Instagram and has more than 65 k+ followers say many of his artworks and Ambedkarite activist work gets a lot of hate comments and cannot be monetised affecting his financial stability. RV Purusothaman, 30 (@purushuarie on Instagram) launched India's first exclusively ungendered fashion label called Purushu Arie in 2017. Has more than 5k+ followers on Instagram and has been a leading fashion figure in the industry. He had started his blog in 2009 was recognised as most influential by the Hindustan Times in 2011. But when he wanted to publish an article on Casteism in the Fashion Industry he was denied until 2021. After publishing and interviews on the topic he lost 1/3rd of his followers. He says the Fashion industry is sensitive to the queer community but not to the upper caste hegemony.

This inhumane treatment was happening even during the Corona pandemic, when the entire world was forced to stay at home, it was expected violence against Dalit men and women would reduce, but on the contrary, it saw a huge spike in both, online and offline spaces. This is clearly enunciated in the book “No lockdown on caste atrocities” by Dalit Human Rights Defenders Network and Zubaan Publication. All these real-life incidents mentioned in the book are horrific and send chills down the spine. As many of these incidents take place on or with the support of SMP's, thus their role in identifying and tackling these incidents needs to be studied in detail. Hence a brief overview of the policies of SMP's on caste-based hate speech is explained below. Some of the measures taken by SMP includes:



**1. Facebook:**

Facebook has been present in India for 15 years and with more than 316 million users, but caste was included in its community standard in 2018. Facebook has also added a list of denigrated comparisons, generalisations, etc that is considered dehumanising.

**2. Instagram:**

It does not provide options to categorise hate speech based on caste but only on race and gender. Both Facebook and Instagram lack granularity of information on enforcement/actions taken.

**3. WhatsApp:**

The hatred on Facebook, Instagram often gets translated into personal messaging platforms like WhatsApp. WhatsApp also lacks strict policies and granularity of information to tackle caste-based hate speech being circulated on its platforms.

**4. X (formerly Twitter):**

Hate speech policy was formulated in 2017 but Caste based hate speech was included in 2020. Twitter owned online audio platform “spaces” does not provide similar inclusion.

**5. YouTube:**

India has the highest YouTube subscribers in the world. IT included caste under its 2019 Hate speech policy. But issues of selective implementation, delayed action, and lack of recognition of multi-lingual hate speech, comments, still languish on the platform.

Apart from the SMP, the government had also tried to take certain legislative and policy measures the latest being the Draft Broadcast Services (Regulation) Bill, 2024. The proposed bill has regulations to control digital, independent news creators on SMPs. It has raised serious concerns because of its dubious stakeholder consultation process, bury independent creators under bureaucratic red tape and for its draconian powers which could stifle freedom of speech. Under pressure the government was forced to take the bill back. (Barik and Vishwanath)

**Future Interventions**

Tackling the challenge of caste-based hate speech on digital platforms needs a comprehensive and multi-level cooperation amongst different stakeholders which includes the SMP, Government, International Communities, Civil societies, and the Digital Citizenry. The SMP need to ensure fact checking and content moderation through locals who understand the local culture and caste dynamics. Also, SMP need to include and explicitly mention that caste as a category in their hate speech policy. Companies who have multiple platforms like Meta, X (previously Twitter), Google, etc can have similar guidelines across the platforms to provide uniformity. Developing Anti-Caste modules with the help of Dalit activists and scholars in multiple languages will further help curtail caste-based hate speech. SMP and tech companies need to hire Anti caste activists and anti-caste communications experts as coders, data scientists and AI experts which will ensure that these behaviours can be curbed in the roots. Platforms also need to disaggregate data on the incidences and action taken by the platforms, and put it in public domain for researchers, policy makers and the digital citizenry to know. Further SMP need to take a moral and ethical stand to not monetise and take quick action against caste hate speech-based incidents on their respective platforms.

Legal and Constitutional recognition of Caste based hate speech at National and International level can go a long way in giving it legitimacy and should also provide for penal provisions. Further Countries with significant Indian and South Asian population should pass the law recognising this immediately as Indians carry caste hatred wherever they go. The recent law by the State of California and Seattle City to recognise caste as a form of discrimination is a much-needed positive step and should be replicated in other states and countries.

Along with that massive online awareness campaigns, “digital sensitisation,” and recognising the need to make digital spaces more inclusive for all the digital citizenries. Further infusion of social media spaces with positive messaging that highlights India’s glorious composite culture and exposes bigotry so that the “Digital Amrit Kaal does not create new digital caste walls, instead it breaks them and ensures the Digital Town Square is accessible and accommodative of the digitally one of the most marginalised sections of the society.

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## **Complexities of Biomedical Interventions and Ideological Oppression in *Never Let Me Go* (2010)**

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### **Abstract:**

*This research paper explores the moral and ethical dilemmas put forth by the possible advent of human cloning through the film *Never Let Me Go* (2010). It dissects the film in order to shed light on the lives of the subjects of human cloning and the consequences that must be faced if a society fails to engage with the pertinent question of what it means to be human.*

*Keywords: Dystopian society, Biomedical research, Human cloning, Human rights, Ideology, Indoctrination*

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### **Introduction**

*The film *Never Let Me Go* (2010), directed by Mark Romanek, is a dystopian coming-of-age film based on the 2005 novel of the same name written by Japanese-born British author Kazuo Ishiguro. It relates the events in the lives of three students, Kathy, Ruth, and Tommy, played by Carey Mulligan, Keira Knightley, and Andrew Garfield, respectively, from the prestigious Hailsham boarding school. Set in a world where scientific advancements have made the existence of ‘clones’ possible, the film beautifully portrays their ordinary lives and paints an intricate portrait of their emotions and experiences as people who were created solely to be of use to others.*

Bioethicist John Harris describes the arguments for and against human cloning in his essay, quoting British Nobel Prize winner and physicist, Joseph Rotblat, who described it as science out of control, creating "a means of mass destruction", and the German newspaper *Die Welt*, that evoked the Third Reich, commenting: "The cloning of human beings would fit precisely into Adolph Hitler's world view" to show how the dangers of unregulated or state-sanctioned human cloning could be overstated. (Harris,444). However, in the movie, we see a reflection of these worries about the possible outcomes that could result from the advent of human cloning.

The prevailing ideology in this dystopian world seems to echo American legal philosopher Ronald Dworkin's statement that cloning could be useful "to make the lives of future generations of human beings longer and more full of talent and hence achievement." (Qtd. in Sandel 251). It is the prevalence of this ideology, along with the complete isolation and dehumanization of the clones, that leads to the development of a system in which an entire society is able to justify the existence and exploitation of a whole class of people.

Many science fiction movies have explored the concept of involuntary organ donations before, often in the form of thrillers. In the 2005 action thriller *The Island*, the main characters Lincoln Six Echo and Jordan Two Delta realize that they exist because of wealthy individuals who paid to have their clones

created so that they could harvest organs that would be completely compatible with their bodies. They had been contained in a facility where they are told that they are the survivors of an apocalyptic event that has killed most of humanity and that they must obey the rules and never leave the facility. When the protagonists figure out the deception, they are hunted down and must reveal the truth to the rest of the clones and to the world.

Similarly, in Danishka Esterhazy's *Level 16*, girls at the Vestalis Academy, an isolated boarding school, are seemingly being prepared to be adopted by distinguished members of society. They are constantly surrounded by cameras and are not allowed to leave their prison-like abode, since they are told that the air outside is dangerous. They are sedated by giving them "vitamins" and remain unconscious for most of the day and when they are awake, they must perform chores and watch videos about being "clean girls" and preserving the "virtues of femininity". The girls eventually figure out their real purpose when they find a student that had been "adopted" in the basement with the skin of her face peeled off. The ruse finally breaks when the protagonist, Vivienne, stumbles upon the ad for Vestalis clinic, a facility that specializes in face lifting. The girls finally escape their prison and are found by the police of Bulgaria, where this company was carrying out its practice.

While neither of these films are set in dystopian worlds, they do contain dystopian elements within them. An entire ecosystem of people that are ready to sacrifice someone else's life in order to benefit themselves, whether that be the people using and commissioning these services or the ones helping these exploitative systems to function. These movies create a clear distinction between the heroes and the villains, the oppressed and the oppressors, usually in a sterile and unnatural environment. The oppressed figure out the truth and consequently rebel, successfully putting an end to the tyranny of the people who had abused them and taken away their human rights. However, Ishiguro's writing is different in this regard. There are no heroes and there is no rebellion. There is only the exploration of an individual and their life as created and governed by forces outside their control.

Both the film and the novel begin with the line "My name is Kathy H.". It is followed by a short introduction of the main character. What follows is an account of her childhood and adolescence as a 'donor'. However, this is not just Kathy's story. It is the story of all the donors. The device of narration being used immediately acquaints the reader and the viewer with Kathy, now 28 years old, as we get immersed in her memories. It allows the reader to be Kathy's intimate companion as we journey through the years. The principal purpose here is empathy. The film, however, begins with Kathy standing facing away from the camera, looking at an operation theatre through a viewing window as a man is rolled in on a hospital bed. When we see her face, she looks worried as the man looks at her with a small smile on his face. It is an intimate scene, with the two looking at each other with sad smiles.

Although we do not know the relationship or history between the two, this very human predicament of being powerless in the face of death easily creates empathy in the viewer's heart towards Kathy. Details like the cold, blue hospital room and the masked doctors preparing to cut into the man, not even glancing at the woman staring at him, mark the bleak beginning of the film. Death is not a major theme in the film; therefore, it is important to note the significance of this opening scene (absent in its literary source) that the movie comes back to at the end. Apart from the narration, which gives a little bit of context about 'donors' and 'carers' not being machines, this scene sets up the climax, where its impact is magnified by the story of their lives that had been told before it, as the two accept their fate.

The detailed realism in the film, including the sets, costumes, sound design, and the actors' understated performances, is what adds to its emotional weight. The manor with scratches and tiny dents on the

doors and walls, the walls not being perfectly painted, and the children's uniform frequently looking disheveled all add to the visual realism. These, along with the diegetic noise being hyper-realistic with even the buzzing of a fly as it crosses the camera being heard and the non-diegetic sound including soothing and cheerful orchestral music, steadily maintain the audience's immersion in the world even when the dystopian aspects start cropping up. Despite being set in a dystopian world, there is rarely any depiction or mention of technology except in the primary scene, where it feels like an omnipresent villain. The entire film seemingly lulls any sense of impending doom with its pastoral settings of summer, with flower fields blooming and natural lighting providing a softer, slightly hazy look to the surroundings. It is a facade compounded by the scenes of the students playing in the fields, free of any worries.

The peace instilled in the viewer by the paradisaical setting and the shots of young girls and boys singing in the school assembly is disturbed by the narrative as the principal reminds the students how 'special' they are. This seemingly innocuous speech takes a more uncomfortable turn as the viewer is shown the small and clueless faces of extremely young and impressionable students. A cigarette has been found in the grounds, leading to the principal strictly warning the students not to smoke, immediately followed by the assertion that Hailsham students are 'special'. This creates an uneasy feeling in the audience since we know that despite the message being a good one, it is the ultimate goal that is being reminded to these children. Since the children are naive, they accept the ideology more readily, without any challenge or question. This brainwashing is, in Marxist theory, referred to as the false consciousness, i.e., the working class having "a distorted and limited form of experience," which leads to the existing social order enjoying their support or at least their usually unquestioned acceptance (Eyerman 46). In the contemporary world, it is a known fact that the organ donation industry as well as the black market for organs prey on the lower classes, especially in underdeveloped countries. (Rothman et al. 2740; Shimazono, 955) In the movie, the clones could be seen as the lower classes who must sacrifice their lives for the bourgeoisie. It also seems to be hinted at in a scene where the main characters look into an office through a glass wall, hoping to find the possible original for one of them, looking at the enormous disparity between their fortunes and fates yet not engaging with the reason behind this.

One detail in the assembly scene is Ms. Lucy, who will soon become the first person to break the children's bubble and thrust the ideology in their faces. She wears a lighter dress, unlike the other teachers. In the film, she comes across as more sympathetic and curious towards the fate of the clones, perhaps as a result of the general theme of empathy towards the oppressed and to contradict the prevailing ideology, as those raised indoctrinated by it often cannot.

There are very subtle hints about the control the children are kept under, with shots tracking the children running around in the garden with a camera in the corner of the screen and tracker bands on their arms as they lie in bed and gossip about their friends. It is important to understand that the children are ignorant of the unfair treatment meted out to them. Since they live in an isolated community where the adults prefer to tell them the truth cloaked in euphemisms, they do not understand why their predicament is tragic. Keeping with the theme of indoctrination, even scenes in which we see how the students are being controlled, given pills, and tracked as they leave the manor have an upbeat, excited score playing since the students are happily ignorant at Hailsham.

Donald Joralemon quotes Margaret Jane Radin to discuss the dangers of the commodification of the human body. "We can, and should, live with an "incomplete commodification" that preserves as inalienable those things "important to personhood"" (346). The 'donors' bodies have effectively been commodified by humans, so much so that they do not even feel empathy despite interacting with them

on a daily basis. This commodification results in their entire lives being usurped by their purpose to be ‘donors’ and ‘carers’.

The vital scenes where the theme of the main ideology of this dystopian world is rebuffed happen one after the other. The first one has only the main character present, bathed in soft sunlight coming from a high window. She is holding a pillow to her chest as one would a baby and swaying to a song in which the female singer is pleading with someone to never let her go. This depth of emotion displayed by an eleven-year-old isolated from adult society challenges the prevalent ideology that dehumanizes them, since they are believed to be without a soul. It also makes the viewer question what it really means to be ‘human’.

The audience knows that the summer of the children’s lives is over since the weather in the scene becomes rainy and it begins with the shot of a single flower withering. The students, however, fail to take the hint as they sit in the classroom, fidgeting and trying to focus on the teacher. In the scene, Ms. Lucy tells the students that their adult lives will be very brief since they must donate their vital organs. It is the first time the fate handed out to the children is explicitly stated, and it is too difficult for Ms. Lucy to bear saying it out loud as she turns away from the students and tries to collect herself in a corner.

The camera then shows us close-up shots of the students’ faces, looking confused and slightly frightened. Most of the scene is a medium shot of Ms. Lucy trying her best to keep her composure, a beautifully restrained performance by Sally Hawkins as we realize her moral quandary. The children, however, do not. It is clear that they are most affected not by the words she is saying but by her display of emotion. They don’t understand what upsets Ms. Lucy since their fate, told to them by others using veiled truths, has always seemed ordinary to them since that is all they have been told. It is when Tommy puts back a piece of paper as it falls down that he shows his empathy, symbolically restoring order in the classroom and taking attention away from Ms. Lucy. This inherently human trait of seeing another’s pain and responding to it in such a way that they do not feel embarrassed is noticed by Ms. Lucy, and she instinctively looks down to the ground in shame. While Ms. Lucy is the only guardian that wants the students to know exactly what life holds in store for them, she also conveniently turns her back on them when the injustice becomes too difficult for her to bear, which is reminiscent of the way society has completely failed generations of ‘donors’. In the last part, we see Kathy’s life without her friends. Her room is bare and lacks any of the personality that we saw in her personal spaces in Hailsham and at the Cottages. Having been a ‘carer’ for a large part of her life, she has unfortunately dehumanized herself. Her dining table faces the wall, shrouded by shadows due to the drawn curtains. These visual clues tell us that while she may still be the calm and collected Kathy we know outwardly, she really has lost her identity and possibly her will to live.

Another pivotal scene is when the three friends reunite and travel to see a ship wrecked on the shore nearby. The ship is symbolic of Hailsham, which was closed down due to a lack of funding for the humane treatment of clones. Hailsham was a representation of the counter-ideology that the ‘donors’ were humans and deserved to be treated humanely. It was also the trio’s only home and the place where they lived an almost normal life. The three of them reconcile in the place that is most dear to them and to which they owe the memories of the best times of their lives. In this scene, Ruth apologizes to Kathy and Tommy for keeping them apart when she knew they loved each other. For the first time in the movie, Ruth sits apart while Kathy and Tommy finally sit next to each other and embrace. This detail is again a subtle way of showing the evolved dynamic between the trio, as they, but especially Ruth, have internalized the fact that she will soon die, leading to her wanting her conscience to be clean. At

the end, Kathy looks on as Tommy prepares for his donations. They smile at each other one last time, remembering all those times they secretly smiled at each other during their childhood, effectively delivering a heart wrenching conclusion to the film and the story of the ‘donors’.

Ishiguro states that the story of *Never Let Me Go* is “A kind of a metaphor if you like for human existence/ human condition – the fact that our existence is limited. ...the sci-fi speculative surface of the story was the last piece...almost like a device...” (Film Independent Interview). As Stephanie Petrillo suggests that the cloning-based organ donation in Ishiguro’s textual world emphasizes the morally impermissible nature of this activity in contrast to the emerging trends in biomedical research (2014). A critical analysis of the novel and film adaptation of *Never Let Me Go* lends a sense of ambiguity in the articulation of what is to be a “human”? In this ambiguity lies the seeds of exploitation as “society either does not consider the clones human, or does not consider them “human enough” to be granted the same rights as non-cloned humans” (Petrillo 46). Petrillo believes that “constructing a society that is essentially indifferent to the subjects from whom vital organs are harvested, Ishiguro demonstrates that humans are perpetually self-interested, to the detriment of other beings” (47). Through compelling narratives and nuanced performances, the film adaptation of Ishiguro’s novel sheds light on themes of false consciousness, the commodification of the human body, and the struggle for empathy and identity. The juxtaposition of idyllic settings with the harsh realities faced by the characters underscores the insidious nature of ideological control and an ignorant and stuporous society. Ultimately, the film serves as a powerful commentary on the importance of challenging oppressive ideologies and recognizing the inherent dignity and humanity of all individuals.

### Conclusion:

In conclusion, "*Never Let Me Go*" poignantly illustrates the devastating consequences of ideological oppression in a dystopian society where human clones are dehumanized and exploited for their organs.

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# Quantum Computing in Higher Education

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## **Abstract:**

*Quantum computing is rapidly emerging as a key technology that has the potential to revolutionize fields such as cryptography, chemistry, and machine learning. As this technology continues to advance, it is critical that the next generation of professionals be equipped with the skills and knowledge to harness its power. This paper examines the current state of quantum computing in higher education and its implications for the future of the field. The paper also discusses the importance of incorporating quantum computing into the curricula of relevant disciplines, such as computer science, physics, and engineering, and the role of universities and other institutions in fostering a quantum-ready workforce. The goal is to provide a comprehensive overview of the field and inspire higher education leaders to take a proactive approach to preparing students for the quantum computing revolution.*

*Keywords: Quantum Computing, Machine Learning, Cryptography, Revolutionize, Computer Science.*

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## **Introduction**

Quantum computing is a rapidly evolving field that is changing the way we think about computers. The development of quantum computers has made it possible to perform computations beyond the capabilities of conventional computers. Quantum computers perform computations using quantum bits (qubits) that can exist in multiple states at the same time. This allows quantum computers to perform certain computations much faster than classical computers (Aaronson, S., & Chen, L. 2018). The potential applications of quantum computing are numerous and span a wide range of fields, including medicine, finance, and cryptography.

Quantum computing has the potential to revolutionize many areas of higher education, including computer science, mathematics, and physics. In computer science, quantum computing has the potential to improve algorithms and data analysis, while in mathematics it can enable the solving of complex problems that currently go beyond classical computing. In physics, quantum computing can be used to simulate quantum systems and accelerate the discovery of new materials. Quantum computing has the potential to change the way we approach teaching and research. It can be used to solve complex mathematical problems that are currently unsolvable by classical computers. This opens new avenues for research in areas such as cryptography, optimization and machine learning. Quantum computing can also be used to simulate quantum systems that are very useful in fields such as chemistry, materials science, and biology.

The growing field of Quantum computing in the field of data processing is aimed at using the principles of quantum mechanics. This solves complex computational problems that cannot be performed by conventional computers. Unlike classical computing, where data is represented by bits that can only have the value 0 or 1, quantum computing uses qubits (qubits) that can exist in multiple states

simultaneously thanks to a phenomenon called superposition.) Use the. The basic unit of quantum computing is a quantum gate, an operation that operates on one or more qubits. Quantum gates can be combined into quantum circuits that resemble classical circuits in their ability to perform logical operations on data (Biamonte, J., & Love, P. 2017). However, quantum circuits can also take advantage of phenomena such as entanglement and interference to perform computations exponentially faster than traditional algorithms.

### **Impact of Quantum Computing on Higher Education**

One way that higher education institutions can incorporate quantum computing into their curricula is by offering courses that introduce students to the principles and applications of quantum computing. These courses can be offered as standalone courses or integrated into existing computer science and physics programs. In addition to traditional courses, institutions can also offer online courses and tutorials that can be accessed by students around the world. These resources will help democratize access to quantum computing education and ensure that students from diverse backgrounds could learn about this cutting-edge technology. Universities can also establish research centres and collaborate with industry partners to conduct cutting-edge research in quantum computing (Harrow, A. W., Hassidim, A., & Lloyd, S.2017). This creates new knowledge and techniques and provides valuable research opportunities for students. Overall, the integration of quantum computing into higher education can enable the next generation of researchers and professionals to harness the power of this transformative technology.

Quantum computing is a rapidly growing field, increasing the demand for trained professionals in this field. As a result, many universities and colleges around the world have started offering courses and programs in the field of quantum computing. Here are some of the ways quantum computing is being integrated into higher education. (Ladd et al. 2016).

- i. Courses and Degree programs: Many universities now offer courses and degrees in quantum computing, including bachelor's and master's degrees. These courses cover topics such as quantum mechanics, quantum algorithms, quantum error correction, and quantum cryptography.
- ii. Research opportunities: Students can participate in research projects related to quantum computing and quantum information science. These projects include developing new quantum algorithms, studying the properties of quantum systems, or designing new hardware for quantum computers.
- iii. Quantum Computing Centres: Many universities are setting up quantum computing centres, giving researchers and students access to cutting-edge equipment and resources. These centres also host seminars, workshops, and other events to foster collaboration and learning.
- iv. Online resources: There are also many online resources available for students and researchers in the field of quantum computing, including online courses, video lectures, and tutorials. These resources are often available for free or at a low cost, so anyone with an Internet connection can access them. In addition to formal education, there are also several online resources available for learning about quantum computing. This includes online courses, tutorials, and instructional videos. Accessible to anyone with an internet connection, these resources helped democratize access to quantum computing education.

### **Applications of Quantum Computing**

Quantum computing has several potential applications in higher education, ranging from research to teaching and learning. Here are some examples:( M. Żukowski, B. Muthukumar, and J. M. Arrazola. 2015)

- i. Quantum simulation: Quantum computing can simulate complex quantum systems, allowing researchers to better understand the behaviour of materials, molecules, and other physical

systems. It has applications in areas such as materials science, chemistry, and physics, helping students and researchers gain a deeper understanding of these topics.

- ii. **Quantum Cryptography:** Quantum computing can also be used to develop new cryptographic protocols that are more secure than traditional methods. It can be applied to areas such as cyber security and privacy, helping students and researchers better understand these important issues.
- iii. **Machine learning:** Quantum computing has the potential to significantly speed up certain types of machine learning algorithms, with potential applications in areas such as data science and artificial intelligence. It helps students and researchers create new, more efficient machine learning models.
- iv. **Quantum Computing Education:** Quantum computing can also be used to improve teaching and learning in higher education. For example, a university can offer a quantum computing course that includes hands-on experience with real-world quantum computers. This gives students a better understanding of the technology and its potential applications.
- v. **Partnerships with the quantum computing industry:** Many universities are partnering with quantum computing companies such as IBM, Google, and Microsoft to give students access to technology and expertise. These partnerships provide students with internship, collaborative research, and industry internship opportunities to develop their skills and gain on-the-job experience.
- vi. **Data Analysis:** Quantum computing can be used to analyse large amounts of data, such as student data and research data. This allows educators and researchers to find patterns and trends that are difficult to spot using traditional computational methods.
- vii. **Optimization:** Many problems in higher education are related to optimizing, such as scheduling classes, allocating resources, and optimizing learning outcomes. Quantum computing can be used to solve optimization problems more efficiently than classical computing techniques.

### **Challenges on integrating Quantum Computing**

Integrating quantum computing into higher education is a complex and difficult endeavour that requires significant investment of time, resources, and expertise. Integrating quantum computing into higher education presents several challenges. Here are some of the main challenges: Preskill, J. (2015).

- i. **Complexity:** Quantum computing is a complex and rapidly evolving field, and it can be difficult for educators to keep up with the latest developments and incorporate it into their curriculum.
- ii. **Limited resources:** Quantum computing requires specialized hardware and software that are expensive and difficult to access. This can make it difficult for educators to get their students with hands-on experience in quantum computing.
- iii. **Need for interdisciplinary expertise:** Quantum computing requires expertise in several areas, including physics, computer science, and mathematics. Educators and students may need to develop interdisciplinary skills to fully understand and utilize quantum computing.
- iv. **Limited Workforce:** The current shortage of trained professionals in the field of quantum computing is making it difficult for universities to find qualified faculty and for students to find job opportunities after graduation.
- v. **Uncertainties regarding future developments:** (R. Laflamme, K. R. Brown, R. J. Clark, and I. L. Chuang 2015).

Quantum computing is a rapidly evolving field, and there is a bit of uncertainty about which technologies and applications will be most important in the future. This can make it difficult for educators to develop curricula and decide which skills students should focus on. Integrating quantum computing into higher education requires significant investment in resources, interdisciplinary collaboration, and ongoing education and training. However, the potential benefits of quantum computing in education are significant, and universities that can successfully integrate quantum computing into their curricula and research programs are well-positioned to contribute to this rapidly growing field.

### Higher Education and Quantum Computing

There are several opportunities related to quantum computing in higher education. (Simon, D. 2013, Van Meter, R., & Yamamoto, Y. 2013).

- i. **New research opportunities:** Quantum computing is a rapidly growing field, and there are many opportunities for universities to conduct cutting-edge research in areas such as quantum algorithms, quantum cryptography, and quantum simulation.
- ii. **Interdisciplinary collaboration:** Quantum computing is a highly interdisciplinary field requiring expertise in physics, computer science, mathematics, and engineering. This provides universities with opportunities to collaborate across departments and disciplines, fostering new partnerships and interdisciplinary research.
- iii. **New Curriculum and Programs:** The emergence of quantum computing provides universities with opportunities to develop new curricula and courses in quantum information science and related fields. This helps prepare students for careers in the growing quantum computing industry.
- iv. **Industry partnerships:** Interest in quantum computing from the private sector is high, and many companies are investing in the development of quantum technology. This allows the university to partner with industry and give students access to cutting-edge technology and research opportunities.
- v. **Addressing social issues:** Quantum computing has the potential to address some of the world's most pressing challenges, including climate change, healthcare, and energy. Universities can play a key role in developing quantum solutions to these challenges, providing students with opportunities to make a real impact on society.

### Conclusion

In conclusion quantum computing is a rapidly growing field with great potential to revolutionize many areas of technology and science. Quantum computing is an exciting field with the potential to transform many areas of higher education. Its application in higher education provides opportunities for new research, interdisciplinary collaborations, new curricula and programs, industry partnerships, and tackling societal challenges. However, there are also challenges associated with integrating quantum computing into higher education, such as technical complexity, lack of trained professionals, cost, rapidly evolving field, and access to hardware and software. Still, quantum computing is expected to bring major advances in computing, including faster computations, new algorithms, improved machine learning, secure communications, and advances in physics and materials science. As quantum computing continues to evolve, it is critical that universities play a key role in preparing students for careers in this growing industry, fostering innovation, and solving complex challenges. Universities must invest in education, training, and infrastructure to prepare students for the future of computer science.

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# Revolutionizing electric vehicle charging: a turbine-integrated approach for extended range and efficient cooling.

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## **Abstract:**

*In the dynamic realm of electric transportation, there is a quest to enhance the range, efficiency, and sustainability of electric vehicles (EVs), resulting in a ground breaking concept known as the Turbine-Integrated Electric Vehicle Charging System. This innovative approach aims to overcome current challenges in EV charging infrastructure while simultaneously addressing critical issues such as charging time, battery efficiency, and environmental impact. The significance of this solution is particularly pronounced in regions like India, where the scarcity of EV charging infrastructure poses a significant challenge to widespread adoption. This paper delves into the details of this transformative concept, it becomes evident that the Turbine-Integrated Electric Vehicle Charging System not only addresses current challenges but also heralds a new era in the realm of electric transportation which embodies a commitment to environmental responsibility.*

*Keywords: Electric Vehicles, Simultaneous Charging, Sustainable Charging, Turbine Integration, Vapor Cooling.*

## **Introduction**

The growing popularity of electric vehicles (EVs) as a commercially viable and technologically advanced means to reduce greenhouse gas (GHG) emissions is evident. EVs are user-friendly, emit minimal noise, and eliminate the fuel costs associated with traditional vehicles, making them particularly well-suited for urban environments. Despite their promising future, widespread adoption of EVs is hindered by several significant challenges. While the number of charging stations has seen a substantial increase, the demand for more charging infrastructure persists. One of the major drawbacks impacting the penetration of EVs is the extended charging time. Addressing this issue requires innovative solutions. (Dhameja, S. Electric 2001)

In the dynamic landscape of electric transportation, there is a quest to enhance the efficiency, range, and sustainability of EVs. A groundbreaking solution has emerged in the form of the Turbine-Integrated Electric Vehicle Charging System. This innovative approach aims to overcome existing challenges in EV charging infrastructure, including issues related to charging time, battery efficiency, and environmental impact. This forward-thinking concept holds particular significance in regions like India, where the scarcity of EV charging infrastructure poses a substantial barrier to widespread adoption. The proposed system not only provides a practical and sustainable means of extending the range of electric vehicles but also introduces a novel approach to optimize the charging process. This minimizes downtime and addresses a common concern associated with traditional EV charging times. (Ehsani, M.; Gao, Y.; Emadi, A, 2009)

Crucially, the initiative takes a holistic approach to sustainability. It incorporates vapor cooling mechanisms, eco-friendly charging stations powered by renewable sources, and environmental stewardship through the strategic planting of trees along highways to absorb carbon dioxide. This comprehensive strategy aims to create a more efficient and environmentally friendly ecosystem for electric vehicles, fostering their wider acceptance and integration into mainstream transportation.

### **Related Work**

Several foundational works can be considered to have significantly contributed to the efforts to realize wireless charging for EVs. Aligning with the goals set to compile a comprehensive study, well-acknowledged and frequently cited papers were reviewed first to gain insight into the trends in the literature. The observed pattern is that the research can be tentatively, but with good reason, categorized as either technical or operations research. Following this taxonomy, key areas in each category were determined, and the literature that discusses those areas was reviewed. This strategy allowed all types of battery electric vehicles (BEVs), systems, and practices mentioned in the literature to be covered, making this study a comprehensive addition to the existing literature. (Freris, L.; Infield, D. 2019)

The technical reviews focus on wireless power transfer (WPT) methods, topologies for wireless charging, electric vehicle design, and hardware design, among other engineering topics. On the other hand, operations and systems research includes studies of operational strategies such as optimal allocation of the charging infrastructure, range extension, pricing and billing, construction and installation strategies, and economic analyses, among other areas of operations and systems research. Other reviews may feature either historical developments, or the recent and current status of research into the broader topics of wireless charging for EVs. It is worth noting that because the area is nascent and the literature covers a broad range of topics, many of the research works include more than one aspect for discussion. (Garcia-Valle, R.; Peças Lopes, J.A, 2012)

Thus, the aims of this study are very clear. It includes a summary of the past, the state of the present, and predictions for the future of wireless charging for EVs. The study also organizes and reviews the existing, broad literature. It provides technical and scientific exposition, like the details and comparison of the charging technologies available. Moreover, it provides the operations and systems perspective for a wider discourse. Lastly, this study serves as a complete guide for researchers, policymakers, and government entities as a reference for future work in the field of wireless EV charging. (Lukic, S.M.; Cao, J.; Bansal, R.C.; Rodriguez, F.; Emadi ,2008)

### **Materials and Methods**

#### **I. Turbine Integration:** (Leitman, S.; Brant, B, 2008)

Methods: Simulation and modeling: Computational tools may have been used to simulate the effects of turbine integration on vehicle range.

Vehicle testing: Real-world testing of integrated turbines on electric vehicles.

Materials: Lightweight materials for turbine components.

#### **II. Segmented Battery Design:**

Methods: Battery design and engineering: Research and development in the design of batteries with segmented structures. (Lowry, J.; Larminie, J. Electric, 2012)

Charging time measurement: Testing and measuring charging times of batteries with segmented designs.

Materials: Advanced battery materials: High-performance materials for battery segments.

Heat-resistant materials for managing heat generation during charging.



**III. Vapor Cooling System:**

Methods: Thermal analysis: Assessing heat dissipation and cooling efficiency.

Comparative studies: Comparing temperature profiles with and without vapor cooling.

Materials: Heat conductive materials for vapor cooling components.

Fluids for the vapor cooling system.

**IV. Green Highways:**

Methods: Environmental studies: Assessing the impact of trees on air quality, carbon sequestration, and noise reduction.

Sustainable infrastructure planning: Incorporating green elements into highway planning.

Materials: Trees and vegetation for carbon sequestration and air purification.

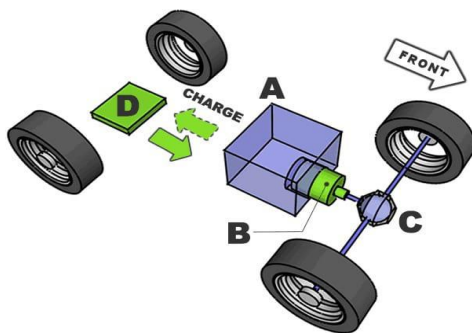
Sustainable materials for construction in green infrastructure projects.

**Findings and Discussion**

**I. Turbine Integration: Transformative Results in Electric Vehicle Charging**

Turbine integration is a promising technology that can help to accelerate the adoption of electric vehicles. By increasing the range of electric vehicles, turbine integration can make them more practical and appealing to consumers.

Figure 1 represents turbine integration transformation results also table I shows the range of different electric vehicles after turbine integration, which can be seen as a transformative result in electric vehicle charging. Turbine integration can significantly increase the range of electric vehicles, making them more practical and appealing to consumers. For example, the Tata Tiago EV, which has a range of 250-350 km before turbine integration, can see its range increased to 275-385 km after integration. This represents a range increase of up to 13.5%. The Kia EV6 and Volvo C40 Recharge also see significant range increases after turbine integration. The Kia EV6's range is increased by 180 km, while the Volvo C40 Recharge's range is increased by 380 km. This represents range increases of up to 25.4% and 71.7%, respectively. (Lowry, J.; Larminie, J. Electric Vehicle 2012)



**Fig.1- Turbine Integration- Transformation Results [8]**

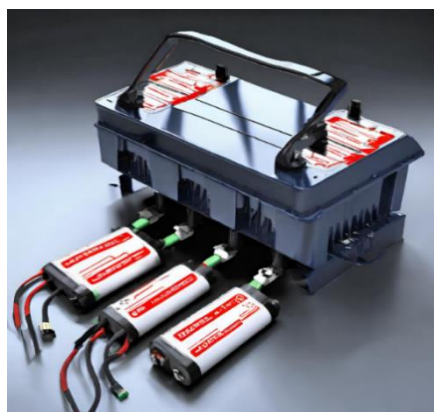
**Table I- Range of Electric Vehicles**

Model Name	Range	After Turbine integration in vehicles(For every 100km + 10km)
Tata Tiago EV	250-350 km	275-385 km
Kia EV6	708 km	780 km
Volvo C40 Recharge	530 km	

**Segmented Battery**

Figure 2 represents segmented battery design enabled parallel charging of multiple segments, significantly accelerating the overall charging process. (Xygkis, T.C.; Korres, G.N.; Manousakis, 2018)

- The 75% reduction in charge time was observed across various battery sizes and charging rates.
- This innovative approach demonstrates the potential for faster EV charging, addressing a major barrier to widespread EV adoption.
- Reduced charging time: Enables faster and more convenient EV charging, enhancing user experience and driving EV adoption.
- Improved battery health: By distributing the charging current across multiple segments, heat generation is minimized, leading to a longer lifespan for the battery.
- Increased efficiency: Parallel charging minimizes energy losses during the charging process.
- Enhanced safety: Smaller battery segments are easier to manage and potentially safer in case of accidents or thermal runaway events.



**Fig.2 - Segmented Battery Design for Rapid Electric Vehicle Charging [9]**

**III. Vapour Cooling System-**

User can see that the temperature without vapour cooling is always higher than the temperature with vapour cooling. This is because vapour cooling helps to remove heat from the system. As shown in fig 3 the graph shows that the temperature difference between the two systems increases over time. This is because the vapour cooling system takes some time to reach its full cooling capacity.

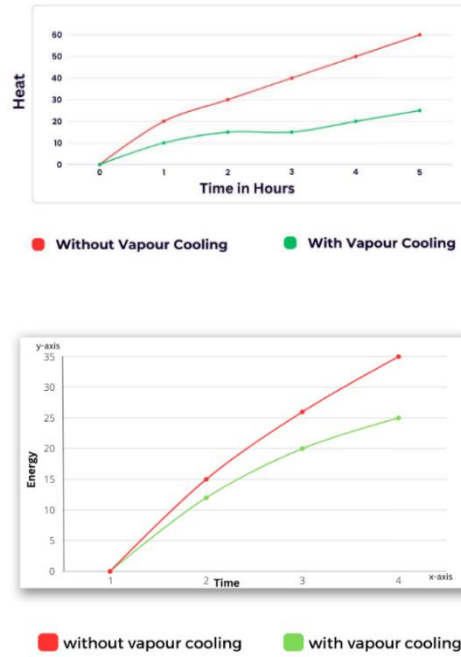


Fig.3- Vapour Cooling System [10]

#### IV. Green Highways-



Fig.4 – Green Highways

- **Carbon Sequestration:** Trees absorb carbon dioxide from the atmosphere, a key greenhouse gas contributing to climate change. A mature tree can absorb up to 48 pounds of carbon dioxide annually, offsetting vehicle emissions and reducing our carbon footprint.
- **Improved Air Quality:** Trees act as natural filters, removing air pollutants like nitrogen oxides and particulate matter. This improves air quality and reduces respiratory problems in nearby communities.
- **Reduced Noise Pollution:** Tree foliage creates a barrier, absorbing and deflecting sound waves, thereby mitigating noise pollution from highway traffic.
- **Renewable Energy Generation:** Certain tree species can be used in biomass energy production, providing a sustainable and renewable source of energy.
- **Biofilters for Stormwater Management:** Trees can help clean and filter stormwater runoff, removing pollutants and improving water quality before it enters rivers and streams.
- **Urban Heat Island Mitigation:** Trees provide shade and evapotranspiration, which can help cool down urban areas and reduce the urban heat island effect.

- **Improved Climate Resilience:** Trees can help mitigate the impacts of climate change, such as flooding and droughts, by providing natural barriers and increasing water infiltration.
- **Sustainable Infrastructure Development:** Planting trees along highways can be integrated into sustainable infrastructure projects, promoting green corridors and creating a more aesthetically pleasing environment.

### Future Prospects

The auto industry's ongoing electrification drives the creation of innovative technologies like wireless charging. Although the idea is not new, WPT applications for electric vehicles (EVs) have gained popularity recently, and the sector is seeing an increase in research activity. A small number of studies address the systems perspective, whereas the majority concentrate on providing technical information. The purpose of this survey is to try and combine the two points of view into a single overview for scholars, decision-makers, and others who are new to the topic of wireless EV charging. The studies that concentrate on technical engineering include a variety of topics, including on-board communication systems, compensation topologies, converter topologies, coil shapes and transformer design for the charging pads, and the modes of charging (static, quasi-, and dynamic). The studies that cover the systems and operations for wireless EV charging go into detail into issues like price and billing, installation difficulties, drive range extension, infrastructure allocation, and cost-benefit and environmental assessments. In addition, adoption of wireless EV charging necessitates an acceleration of the standardization of different areas. Right now, there are a few standards in use. Nonetheless, a large portion of the technology is still in its experimental, development, and testing phases. The bright side is that more and more EV manufacturers are wanting to include wireless charging in their upcoming models.

Future research may explore enhancements and broader applications. The system has transformative potential in electric transportation. The successful implementation of this segmented battery design paves the way for new developments in EV charging technology. Further research and optimization can potentially lead to even faster charging times and wider accessibility to rapid charging infrastructure, ultimately accelerating the transition to a sustainable transportation future.

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# Survey on Trends of Antibiotic Usage and Antimicrobial Resistance Awareness

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## **Abstract:**

*Antimicrobial resistance (AMR) poses enormous challenges including, longer hospital stays, higher mortality rates, and inflated treatment costs. India's National Action Plan (NAP) for AMR was released in April 2017 by the Union Ministry of Health and Family Welfare. If perceptions and practices on antibiotic usage are known for a community, it will help to strategize effective management of AMR. The current study had 23 questions to analyse the awareness of 238 respondents from the urban area regarding AMR. The survey indicated that even educated people are unaware of the proper usage of antibiotics and the dangers of antibiotic resistance. It is imperative to have strategies designed to increase awareness about AMR so that there is better understanding leading to judicious use of antibiotics. Thus, the current study provides valuable data that discloses trends and patterns of antibiotic use in the young Indian urban community.*

*Keywords: Antimicrobial Resistance (AMR), National Action Plan (NAP), multi-drug resistant (MDR), Allergic reaction, Amoxicillin.*

## **Introduction**

The World Health Organization (WHO) has declared that antimicrobial resistance (AMR) is one of the top ten global public health threats humanity is facing (Leal et al., 2022, pp. 220–232). To combat this issue, it is imperative to study the antimicrobial resistance pattern in clinical setups and also in the community. In this regard, understanding people's awareness towards antimicrobial resistance is of paramount importance. In one of the general meetings of the World Health Assembly in 2015, an action plan was drafted to help solve the increasing problem of antimicrobial resistance (Effah et al., 2020, pp.1-9). India's National Action Plan (NAP) for AMR was released in April 2017 by the Union Ministry of Health and Family Welfare (Ranjalkar and Chandy, 2019, pp. 1828–1834). The objectives of both the plans had common points - to enhance public knowledge on antimicrobial resistance through effective communication, education, training, enhancing surveillance measures and strengthening infection prevention and control.

The development of antimicrobial resistance is a natural phenomenon and several factors play a contributing role in antibiotic resistance. However, it is found that in the selection of resistant bacterial strains, inappropriate use of antibiotics has been identified as the main cause. Antibiotic-resistant strains have emerged among both Gram-positive and Gram-negative species. Examples include *Staphylococcus aureus*, *Enterococcus species*, *Pseudomonas aeruginosa*, *Acinetobacter species*, *Escherichia coli*, *Klebsiella pneumoniae*, and *Neisseria gonorrhoeae*. The rise of superbugs is another cause for alarm (Ranjalkar and Chandy, 2019, pp. 1828–1834). They denote multi-drug-resistant organisms that can be treated only with the use of high-end antibiotics (Ranjalkar and Chandy, 2019, pp. 1828–1834). Antibiotic resistance in *Mycobacterium tuberculosis* has led to the occurrence of multi-

drug resistant (MDR) and extensively drug-resistant (XDR) tuberculosis which are extremely difficult to treat (Kasten, 2016, pp. 28-32).

Bacteria develop antibiotic resistance by various mechanisms and there have been additions in novel mechanisms and dissemination of antibiotic resistance in the last decade. Resistance towards beta lactam antibiotics is very commonly seen making them ineffective in therapeutics. Carbapenems and Colistin are important fall-back antibiotics that are used after the failure of other antibiotics in extreme cases of drug-resistance. However, in the last decade, drug-resistance mechanisms have been identified among Gram-negative organisms against these antibiotics too (Aggarwal et al., 2018, pp. 103-106). Studies have shown that resistance to antibiotics is directly linked to their usage (Bell et al., 2014, pp. 1-25). In India, an increased consumption rate of antibiotics has been reported (Farooqui et al., 2018, pp. 1-11). The reasons leading to such situations are multiple, like easy access to medicines over-the-counter, self-medication, simultaneous use of more than a single antibiotic when not necessary, and regulatory issues. Not only misuse and overuse, but underuse of antibiotics also leads to AMR (Ranjalkar and Chandy, 2019, pp. 1828–1834). Besides the healthcare sector, antibiotics are also used in livestock and agriculture for various purposes. This uncontrolled usage leads to environmental pollution, acting as one of the main factors for the rise and dissemination of antibiotic resistance.

In India, it is essential to conduct studies aiming to assess people's knowledge and perceptions about AMR. Such studies aid in verifying the impact of awareness-raising campaigns and may serve as an indicator to check the National Action Plan for AMR. Hence, the main goal of this study was to make the public aware of the issue of AMR and evaluate the level of knowledge and behaviours related to AMR.

### Methodology

In the current study, an observational, cross-sectional survey involving members of the public was conducted online during the Covid pandemic by the authors. The survey was accessible on the Google Forms platform from January 2021 to April 2021 ([https://docs.google.com/forms/d/1t\\_UYxjA5Ehj4VGDun2WQC92uFQBI\\_ptZZK81oAGrm5A/viewanalytics](https://docs.google.com/forms/d/1t_UYxjA5Ehj4VGDun2WQC92uFQBI_ptZZK81oAGrm5A/viewanalytics)). The questionnaire was structured to facilitate easy access and answering by the general public. The questionnaire was designed to assess individuals' knowledge of antibiotics and antibiotic resistance, and the pattern of antibiotic usage by the respondents.

The survey form consisted of total 23 questions, comprising open questions and multiple-choice questions distributed over two sections in English. The first section consisted of the personal information of the respondents to gain information about their age, education, and profession. The second section consisted of 17 questions to evaluate the awareness about AMR and its effects, usage pattern of antibiotics, the allergies and side effects encountered. Summary of the responses were obtained and data was analysed statistically using Student's t-test and ANOVA statistical test.

There were 238 participants in the survey who had given their consent to use the data of the survey for further research purposes. Out of 238 respondents who took part in the survey, 60.5% were females and 39.5% were males. The average age of the respondents was 24 years and most of them were from the student category of urban areas.

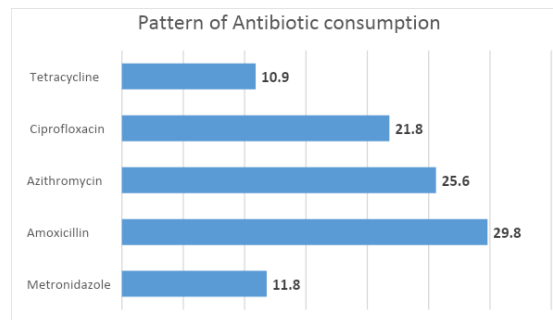
### Results and Discussion

The problem of antibiotic resistance has been a major hurdle for the public health sector. To overcome the problem of antibiotic resistance, the number of times antibiotics are consumed within a specified time is very crucial (Effah et al., 2020, pp. 1-9). 36.6% of the respondents had consumed antibiotics more than twice in the last 12 months, whereas 15.1% had consumed for more than five times in one year. This prevalence was alarming in the pandemic scenario. Around 63% of the respondents did not consume antibiotics without consulting a doctor, 26.5% were in dilemma and 10.5% had consumed

antibiotics without a doctor's consultation. Hence, we can interpret that most of them may be aware of the consequences of using antibiotics without consulting a doctor.

Non-prescribed sale of antibiotics is one of the major causes for increased consumption of antibiotics which facilitates the emergence of drug resistance. Over-the-counter sale of antibiotics in India, without prescription and often at partial doses, is quite common even though the practice is not legal and is strictly prohibited by the government. A study reported by Chandran and Manickavasagam (2022) carried out in the state of Tamil Nadu, India, stated that the Pharmacists readily admitted to selling prescription drugs, including antibiotics without a valid prescription (Chandran and Manickavasagam, 2022, pp. 5516-5520). While they knew of antibiotic resistance, not a single pharmacist interviewed was aware of the causes of antibiotic resistance. This indicated a lack of effective education amongst pharmacists (Chandran and Manickavasagam, 2022, pp. 5516-5520) The current survey indicated that medical stores did provide antibiotics without a doctor's prescription but almost 52.1% of medical stores did not provide antibiotics without a doctor's prescription. This suggested that the medical stores in urban areas are aware of the regulations but still, many of them are openly violating the rules.

The pattern of antibiotic usage is the key player of antimicrobial resistance. Hence, it is essential to screen overuse of any antibiotics. A study by Kotwani and Holloway reported the most commonly used antibiotics in the penicillin group, in the public sector, is amoxicillin (Kotwani and Holloway, 2011, pp. 1-9). This result is in accordance with the current study. The most commonly consumed antibiotic by the respondents of the current study was Amoxicillin and the least consumed was Metronidazole (fig 1).



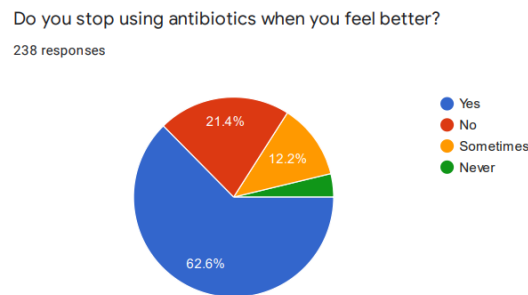
**Fig. 1: Pattern of Antibiotic consumption in respondents**

A study by Tamma et al. (2017) reported 20% of patients experienced at least 1 antibiotic-associated adverse drug event (ADE) (Tamma et al., 2017, pp. 1308–1315). The results of the current study are in corroboration with this study. In the present study, 9.1 % of the population did not experience any allergic reactions to antibiotics whereas 21.9 % of individuals were exposed to allergic reactions. Amongst those who experience allergies, 8.8 % of respondents experienced rash after consumption of antibiotics. Some of them reported nausea and then diarrhoea. A statistical analysis was conducted to find if the gender of the individual affected the allergic reactions or side effects to antibiotics, using a t-test. It was found that there is a significant difference between allergic reactions or side effects due to the antibiotics between males and females (p value=0.02) respondents. The females were found to be more prone to allergies in comparison to males after consumption of antibiotics, especially to skin rash in the present study.

91.6% of the respondents always checked the expiry date of antibiotics before consumption. This indicated that these people were following proper guidelines, however, the average population age for the study was 24 years which may have resulted in these statistics. More studies with geriatrics would give a complete understanding of the pattern. Previous studies have confirmed that keeping leftover antibiotics results in poor compliance with antibiotic therapy (Effah et al., 2020, pp.1-9). In the present

study, it was found that 47.5% of people did not use antibiotics leftover from their last prescription and 17.6% of people used leftover antibiotics from the previous regime.

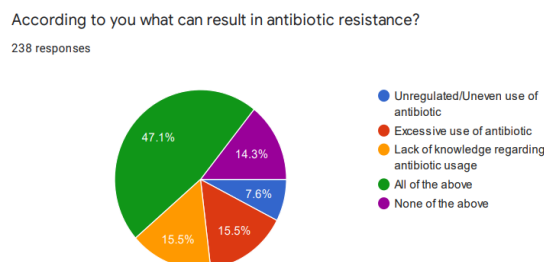
Not completing the dosage of the prescribed antibiotics is another reason for the rise in antibiotic resistance. It is very essential to complete the full regime of an antibiotic, which people may not comply with, due to initial temporary recovery. However, in such cases, surviving bacteria can multiply which may lead to antibiotic resistance. According to the WHO, when a patient stops the intake of antibiotics too early, it favours the bacteria strains that have some natural intrinsic resistance and it is therefore advisable that patients always take the full course of antibiotics prescribed to them by a certified health professional (Effah et al., 2020, pp. 1-9). Around 62.6% of people stopped using the antibiotics after initial temporary recovery and only around 21.4% were found to complete the antibiotic course (Fig 2). These results indicate a very risky pattern and could be the leading source for antibiotic resistance, in India. However, more correlation studies and diverse population needs to be analysed for further predictions.



**Fig. 2: Completion of Antibiotic regime**

A study was conducted in Canada, to investigate the level of knowledge and behaviours related to AMR in a subset of students from the Universite de Montreal. When asked about awareness about AMR, 82.1 % of participants said they knew what antibiotic resistance meant (Leal et al., 2022, pp. 220-232). In this current study, however, the awareness level was low. While answering the questions regarding awareness of antibiotics it was found that 60.5% of individuals were aware of the term antibiotic resistance, 13.4% were unaware and others were not sure what antibiotic resistance meant. This indicated that more education and training would be needed about antibiotic resistance in India. More studies are needed to confirm these results with a more diverse population to be used for further predictions.

When questioned about awareness of the antibiotic resistance, and the reason for the AMR, 7.6% of respondents felt that antibiotic resistance was due to unregulated/uneven use of antibiotics. 15.5% of people responded saying that AMR could be due to excessive use of antibiotics and lack of knowledge regarding its usage, 47.1 % people said that it could be a combination of both reasons and 14.3 % of people were not aware about the reasons for antibiotic resistance.



**Fig. 3: Awareness about reasons of Antibiotic resistance**



Around 58% of respondents agreed that antibiotic resistance leads to longer hospitalisation, higher medicinal cost and increased mortality, whereas 34.5 % of people disagreed and 7.5% of respondents were unable to understand the consequences of AMR.

Combination antibiotics are very commonly used to combat the rising antibiotic resistance menace. Potential achievements with combinations as compared with monotherapy include a broader antibacterial spectrum, synergistic effects, and reduced risk for emerging resistance during therapy (Tangden, 2014, pp. 149-153). In the current study, it was observed that 27.3% of respondents agreed that a combination of antibiotics can help to prevent the antibiotic resistance, 29.4% of respondents disagreed and others were unaware about it. 68.1% of the respondents indicated that they do ask the medical professionals to prescribe them antibiotics if there is clinical evidence of bacterial infection.

AMR has the potential to emerge as a serious healthcare threat if left unchecked and could put into motion another pandemic (Aljeldah, 2022, pp. 1082-1096). Antibiotic resistance in one part of the world may affect AMR control all over (Prestinaci et al., 2015, pp.309-315). To check awareness of this, when a question was asked regarding the consumption of antibiotics in other countries and whether it will affect antibiotic resistance in India. It was agreed by 14.7% of respondents that it would not affect the status in India whereas 27.7 % disagreed and 57.6% were unaware of such consequences.

It is expected that people with a high level of education will have more knowledge of antibiotic resistance compared to people with low level of education. However, a new survey has revealed that not just illiterate but even educated people are unaware of the proper use of antibiotics and the dangers of antibiotic resistance. Scientists at the Pune-based National Chemical Laboratory carried out a survey of 504 persons covering all strata sections of society. Nearly half (47%) of the people were unaware of the difference between over-the-counter drugs and antibiotics (Lavekar, 2018, <https://www.downtoearth.org.in/news/health/even-educated-unaware-about-proper-use-of-antibiotics-survey-60751>). The current study also has similar results regarding the right method to procure antibiotics. ANOVA single factor statistical test was done to study the difference between the qualifications of the individuals and its effect on antibiotic's procurement, without the doctor's prescription. The p value (0.07) indicated that there is no significant difference between highly educated and not highly educated people, in the method to procure the antibiotics. This result indicated that people with higher educational qualifications also did procure antibiotics without the physician's permission. These results could also be affected due to the younger and urban population in the study. More such studies in the rural setup are needed for confirmation of this data.

### **Limitations of the study**

The current study has few limitations. First, the sample population comprised young adults from urban areas of Mumbai and Mumbai metropolitan region (MMR). (SPECIFY) Thus, the results observed here cannot be extrapolated to the general population. This occurred due to dissemination of the Google forms via online mode due to the pandemic. Hence it is essential to collect data from rural sectors comprising of diverse sections of people. Also, most of the respondents were female. This may have been due to the method of survey circulation, indicating that the survey may not have reached both genders in equal ratio. Hence, a survey with a population that is more homogenous should be carried out to confirm the above determinants.

### **Conclusion**

The misuse of antimicrobials not only has consequences for the individuals who consume them but also affects society as a whole and is a matter of public health concern. For this reason, it is of utmost importance that the population comprehends how antibiotics work and are also aware of the impact of their misuse. We need to increase the awareness and education regarding AMR so that people can understand the theoretical basis of AMR, especially the importance of taking the entire course of antibiotics. To minimize the problem of antibiotic resistance, healthcare workers can play a key role. Appropriate usage of antibiotics by patients can be conveyed by healthcare providers through effective

communication. Overall, a strong policy, coordination between public and private sectors and comprehensive strengthening of the healthcare systems, along with strong political will are necessary to achieve the desired level of action and awareness regarding AMR.

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# Role of WDCs and ICs in fostering gender inclusive campus spaces

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**Abstract:**

*This qualitative study investigates the effectiveness of Women Development Cells (WDCs) and Internal Committees (ICs) in promoting gender-inclusive campus environments across six South Mumbai colleges. Data were collected through semi-structured interview schedule from 52 undergraduate and postgraduate students, supplemented by interviews and focus group discussions. Over the course of one month, perceptions and experiences regarding gender sensitivity and responsiveness within institutional frameworks were explored. The findings highlight the challenges faced by WDCs and ICs in addressing gender-based violence and enhancing inclusivity. Additionally, the study emphasizes the importance of understanding institutional mechanisms and policies to bolster support for marginalized groups and dismantle systemic barriers to gender equality.*

*Keywords: WDC, IC, Sexual harassment, violence, gender sensitivity*

**Introduction**

In contemporary India, institutions of higher education are facing a critical juncture, balancing constitutional ideals of equality with the complexities of evolving social dynamics. With a surge in enrolment, colleges and universities have become bastions of demographic diversity, reflecting aspirations for inclusivity and equity. However, beneath statistical parity lies a nuanced landscape of persistent inequalities along intersecting axes of gender, region, class, caste, religion, ability, and sexuality. Women now represent 42 percent of India's higher education populace, yet their experiences are fraught with multifaceted disparities demanding an intersectional lens. As beacons of knowledge dissemination and critical inquiry, Higher Educational Institutions (HEIs) bear a profound responsibility to confront, challenge, and eradicate all forms of discrimination and harassment, especially sexual misconduct that plagues campuses nationwide. In this era defined by aspirations of equality, dignity, and the unequivocal right to learn and work without fear, HEIs emerge as pivotal agents of change, poised to reshape narratives, foster inclusivity, and champion the inherent worth and safety of every individual within their sacred vicinity.

This study aims to explore the roles and effectiveness of Women's Development Cell (WDCs) and Internal Committees (ICs) in creating gender-inclusive campus environments. Using a qualitative ethnographic approach, data were collected through semi-structured interview schedule from 52 undergraduate and postgraduate students and primary tool for data collection was in depth interviews and Focus group discussion. The students were from diverse social backgrounds, including caste, class, age, religion, sexuality, and gender, across six prominent South Mumbai colleges: Elphinstone College, Maharashtra College, Wilson College, Saboo Siddique College, Burhani College, and Hinduja College. The research spanned one month to comprehensively investigate the subject.

The primary objective was to understand the sensitivity and responsiveness of WDCs and ICs in addressing gender-related issues on campus. By examining students' perceptions and experiences, the study sheds light on the challenges faced by these committees in combating gender-based violence and promoting inclusivity, including experiences of harassment, bullying, and ragging among men, women, and even non-binary individuals whose experiences are often overlooked. The findings have implications for enhancing institutional mechanisms and policies to create safer and more inclusive environments. By recognizing the strengths and limitations of WDCs and ICs, educational institutions can develop targeted interventions to support marginalized groups and address systemic barriers to gender equality.

### **Objectives:**

- Evaluate the effectiveness of institutional mechanisms, specifically WDCs and ICs, in fostering sensitivity towards gender-related issues on campus.
- Identify and analyse the challenges encountered by WDCs and ICs in addressing gender-based violence within the campus environment.
- Assess the level of awareness and understanding among students regarding the roles and functions of WDCs and ICs.
- Explore the perceptions, experiences, and expectations of students regarding the efficacy of WDCs and ICs in promoting gender inclusivity and combating gender-based violence on campus.

### **Review of Literature:**

The establishment of the University Women Development Cell (UWDC) by the University of Mumbai in 2001 aimed to foster a gender-sensitive environment within the university. This initiative was followed by a directive in the same year mandating all affiliated colleges to establish their Women Development Cells (WDCs). These measures were significant steps towards addressing gender issues within the university ecosystem. The introduction of Internal Committees (ICs) mandated by the Prevention of Sexual Harassment Act (POSHA) in 2013 aimed to provide a civil redressal mechanism distinct from the criminal justice system's barriers. The 2019 Code to Combat Sexual Harassment reinforced the importance of ICs within every university, appointing Sexual Harassment Policy Advisors (SHPAs) to ensure effective implementation. To address this, proponents argue for a recalibration of ICs' aims and objectives towards a restorative model of justice. This approach incorporates a feminist understanding of 'due process', considering sexual harassment as a manifestation of gendered oppression (Kothawade, 2019). Internal Committees were envisaged as a civil redressal mechanism to avoid replicating the access barriers that the criminal justice system presented (Saksham Committee Report 2010). Empirical evidence highlights a pervasive culture of silence surrounding instances of sexual harassment, both globally and in the Indian context. Studies reveal that only a fraction of cases are reported, with factors such as fear of adverse consequences, concerns about failed inquiry processes, embarrassment, and a desire to avoid harming the harasser contributing to underreporting. Owing to the paucity of empirical studies and analysis, the problems with ICs have been demonstrated by several noted academics who were a part of the process by which ICs were conceptualized and have been functioning. The Saksham Committee Report of 2010 highlighted the need for ICs to address access barriers and ensure a safe working environment for women. Despite provisions for civil inquiry mechanisms under POSHA, 2013, ICs face challenges in conducting impartial inquiries. Leena Pujari, a sociologist, observed that the lines between the two tend to get blurred during implementation, and the nature of "due process" in ICs replicates that of a "universalist and homogenous" legal system, in the absence of separate guidelines (Pujari 2017).

Ambiguity in the legal framework and lack of clear guidelines pose implementation challenges for ICs. The absence of specific procedures, such as written cross-examinations, hampers the fair adjudication of complaints. Thus, the legality of these interpretations remains in dispute, hindering the adoption of innovative inquiry methods by ICs. The discourse surrounding the role of Internal Committees (ICs) in addressing sexual harassment draws from a variety of scholarly perspectives. Farina (1990) contends that redefining sexual harassment as gender-based harm rather than a private offense is essential for ensuring fairness and justice in IC procedures. Building on this notion, Catharine MacKinnon (1982, 1989) asserts that sexual harassment perpetuates sex-based discrimination, rooted in the historical subordination of women. MacKinnon criticizes existing legal frameworks for their failure to address power dynamics and women's experiences adequately. Goldfarb (2004) explores the dichotomy between public and private responses to sexual harassment, arguing that the current approach overlooks systemic gender-based violence. Sexual harassment has been internalised, and contained in structural forms of male power, that festers itself in terms of economic, cultural, and social dominance over women. Sexual harassment at the workplace, when viewed as an isolated instance of misconduct, as opposed to a pandemic that has structural gendered roots, invariably turns the complaint process into an adversarial process that doesn't seek to locate the power structures which silence women. There is a need to overhaul the methods that are employed by ICs to minimise the access barriers that contribute to the culture of silence. The civil rules that regulate the functioning of the ICs need to account for these feminist methods that seek to enquire into power structures, and account for them when dispensing justice. (Kothawade,2019)

In contrast, Walgrave (2008) advocates for a restorative justice model, emphasizing victim support and community accountability. According to Walgrave, restorative justice prioritizes rehabilitation and repairing relational harm over punitive measures. Zehr (2002) underscores the importance of stakeholder involvement and understanding harm in restorative processes. According to Aapurv Jain (n.d.) of the Gender Studies Group, Due to a lack of a proper comprehensive sexuality education syllabus in educational institutions, young people often face issues relating to gender and sexuality. They also do not know who to turn to and where to access accurate, non-judgmental and safe information on sexual and reproductive health and rights (SRHR) from.

Power dynamics permeate various aspects of our lives, shaping our responses to violence and our approach to disclosure. These dynamics vary among individuals and groups, underscoring the need for an intersectional perspective to address the diverse challenges stemming from different experiences of violence. Recognizing that power differentials influence our capacity to intervene or report incidents of violence, it becomes clear that certain groups encounter greater obstacles in accessing support or disclosing violence. For instance, female students engaged in non-heterosexual relationships may confront societal biases that portray women primarily as victims rather than perpetrators of violence. This stereotype can impede their ability to disclose instances of violence within their relationships effectively. Additionally, similar to the findings of Bull & Shannon (2023), the cognitive and emotional burden of the grievance and disciplinary process can be overwhelming for students who have experienced sexual violence. Interviews with undergraduate students revealed how experiencing sexual violence without adequate support and adjustments from the university can profoundly impact their university experience. This insight highlights the crucial role of institutions in providing comprehensive support mechanisms for survivors of violence.

Moreover, violence encompasses more than just physical acts; it also encompasses verbal harassment and microaggressions, which may go unnoticed but can be just as damaging. The POSH Act defines sexual harassment to include unwelcome acts such as physical contact and sexual advances, a demand or request for sexual favours, making sexually coloured remarks, showing pornography, and any other

unwelcome physical, verbal, or non-verbal conduct of a sexual nature. Munjal (2023). These subtle forms of violence, often directed at marginalized groups, can have long-term repercussions on individuals' health, attendance, academic performance, and overall well-being. The impact of these forms of violence may not always be immediately visible, but their effects can be profound and far-reaching. To conceptualize this spectrum of violence, visual aids like the pyramid of violence can be instrumental. This model illustrates how prejudicial beliefs and attitudes form the foundation of violence, which may then escalate to verbal harassment and, in extreme cases, physical violence, including rape and murder. By employing an intersectional approach, we can better understand the diverse manifestations of violence, including microaggressions and hate crimes, and develop more nuanced strategies for bystander intervention. This approach acknowledges the interconnectedness of various forms of violence and underscores the need for comprehensive and inclusive responses to address the complex realities of violence in our communities. (University of York, 20xx)

### **Methodology:**

The study aimed at exploring the perspectives of respondents through interviews and focus group discussions as the primary tool for data collection. The research design follows qualitative principles, utilizing interviews and focus group discussions to gain an in-depth understanding of the topic. The total of 52 respondents were interviewed, out of which 7 participants were interviewed via Zoom meetings. Respondents were selected from six prominent South Mumbai colleges across various academic streams, including BA, BSc, BCom, BBA, BMM, BMS, Engineering, and others. Participants were drawn from all academic years, including first, second, third, and fourth, representing diverse socioeconomic backgrounds such as age, religion, gender, sexuality, caste, and class. The primary site for data collection was the college campus or areas surrounding the respective colleges. All data obtained were recorded and documented in written form. Information gathered from interviews and focus group discussions was then filled into a Google form, which consisted of both open-ended and closed-ended questions. The Interview schedule served as a structured tool to organize and categorize the responses obtained during the interviews and focus group discussions. It allowed for systematic analysis and comparison of the data collected from different participants. The combination of open-ended questions provided opportunities for participants to express their thoughts and experiences freely, while closed-ended questions enabled the researchers to gather specific information and quantify responses.

A semi-structured interview approach was employed as the primary tool for data collection. This approach allowed for a comprehensive understanding of individual perceptions and ideas related to the research topic. While a predetermined set of specific and factual questions regarding WDCs and ICs, including their constitution, committee members, functioning, activities organized, and challenges faced, was utilized, space was also provided for spontaneous and follow-up questions based on participants' responses. The semi-structured interview process facilitated rich and detailed responses by enabling participants to share their thoughts and experiences in an open-ended format.

My background as a researcher played a crucial role, particularly in minority colleges, where it facilitated access to respondents. For instance, in Elphinstone College, when we needed participants from the science department and faced reluctance, one individual reached out and willingly agreed to be interviewed. When asked about the reason, the respondent mentioned, "I wanted to assist you because we share the same faith." This indicates the impact of shared identity and social location. When discussing questions related to gender, queer, and sexuality, particularly with Muslim respondents, there was a noticeable sense of surprise and discomfort. As a Muslim woman myself, navigating conversations in colleges like Maharashtra, Burhani, and Saboo Siddique was somewhat easier due to shared social identities. However, in colleges like Hinduja and Elphinstone, my identity as a Muslim

woman became a cause for concern. Approaching respondents in these colleges was challenging as we faced stares filled with suspicion and apprehension.

#### **Limitations:**

- The study's sample of 52 respondents may not represent the entire student population across the six colleges.
- The study's limitation includes the absence of perspectives from non-binary individuals, potentially limiting their experiences in the campus.
- Participants may exhibit response bias due to social desirability or reluctance to disclose sensitive information about their college, potentially affecting the accuracy of data.

#### **Ethical Consideration**

Consent was obtained prior to the commencement of the study, wherein participants were informed about the audio recording process. They were assured that their personal information would be kept confidential, and the purpose of the research was clearly communicated to them.

#### **Findings and Data Analysis:**

**Profile of the respondents-** The findings of this research are based on a sample size of 52 respondents, comprising 29 females and 23 males, distributed across six colleges. Maharashtra College contributed 13 respondents, while Wilson College had 9 respondents. Burhani College and Hinduja College each had 11 and 8 respondents, respectively. Elphinstone College, on the other hand, had 6 respondents, and Saboo Siddique College had 5 respondents. Among the respondents, 21 were from the arts stream, 18 from commerce, 6 from science, 5 from engineering, and 2 from management. The research includes 33 Muslim respondents, 14 Hindu respondents, and one respondent each identifying as Christian and Buddhist, respectively. Additionally, one respondent identified as bisexual. Among the respondents, the majority belonged to the general and open category, while a few respondents identified themselves as belonging to the OBC category.

#### **Respondent's Perspectives on Campus Safety and Awareness initiative regarding sexual harassment and violence in campus:**

Most respondents across colleges expressed feeling respected and safe within the campus environment. However, notable exceptions were found among respondents from Maharashtra College and Burhani College, where some individuals reported feeling disrespected by fellow students. Regarding campus initiatives addressing sexual harassment and violence, respondents generally expressed neutrality or disagreement with statements indicating dissatisfaction with their college's efforts. Many noted a lack of awareness programs and discussions on these issues, with initiatives typically limited to special occasions like Women's Day. Concerns were raised about ragging incidents and a general lack of awareness among students about sexual harassment and violence. One respondent from Maharashtra College mentioned, "Ragging does occur in the college, particularly affecting vulnerable individuals who might be hesitant to speak up." Another respondent from Burhani College expressed, "The issues related to sexual harassment and violence are not talked about, and students on campus lack awareness about these issues." Furthermore, respondents across colleges highlighted the absence of comprehensive awareness programs. A respondent from Elphinstone College stated, "I attended only one orientation at the beginning of the academic year and expressed disappointment that there were no subsequent awareness programs in the college." Similarly, a respondent from Wilson College mentioned, "I have not witnessed any campaigning or awareness initiatives regarding sexual harassment and violence within campus." Overall, while some respondents commended their colleges for handling issues effectively for example a respondent from Hinduja College highlighted the proactive measures

taken by the institution. The respondent mentioned that the college does have notice boards addressing issues such as sexual harassment, ragging, eve-teasing, and other forms of misconduct, which are not tolerated on campus., a significant number pointed out shortcomings in awareness initiatives and safety measures.

Perceptions regarding WDC and ICs among students vary significantly, as highlighted by the responses gathered. When asked where they would seek support, information, and help in the event of experiencing sexual harassment or violence on campus, most respondents indicated that they would initially turn to their friends for assistance. Following this, they mentioned professors, family members, and then the WDC, with the local police being a last resort for serious incidents. Some respondents also noted that they would consider approaching the IC and utilizing social media platforms to share their stories. Interestingly, many respondents expressed a preference for handling such situations independently, especially among male respondents. One respondent from Elphinstone College reflected on the prevailing trend among students to bypass committees and resolve issues autonomously, indicating a sense of self-reliance prevalent among today's youth. Similarly, another male respondent displayed a dismissive attitude towards the likelihood of experiencing harassment as a male, asserting his capability to handle any situation on his own. Moreover, insights from Maharashtra College shed light on the cultural perceptions surrounding sexual harassment and violence. A respondent highlighted the reluctance of students to approach official committees, attributing it to a cultural phenomenon where sexual harassment and violence consider as personal problems which are often viewed as matters of honour and family respect. Additionally, it was noted that students often seek help directly from the principal, who is perceived as accessible for addressing various concerns.

#### **Awareness and Participation in College Committees Addressing Sexual Harassment**

Only some of the respondents demonstrated awareness of all the committees in their college aimed at addressing sexual harassment, including the WDC, IC, grievance cell, and complaint box. Primarily, respondents from Wilson and Hinduja colleges exhibited this comprehensive awareness, whereas most respondents were only familiar with the WDC and complaint box in their respective colleges. Among those aware of the WDC and IC, only a few could identify the members of these committees. When questioned about participation in gender-related activities organized by WDC and IC, half of the respondents admitted to never participating. Those who did participate often held positions within college committees. One respondent from Maharashtra College shed light on the gender bias within WDC activities, mentioning, "They have been told that boys can't participate in WDC activities as it's only for girls and further said there is no male professor as the member of WDC." Similarly, a male respondent from Burhani College expressed disinterest, believing such events were exclusively for girls. Another respondent from Saboo Siddique College highlighted the disconnect between organizing and participating in events for women, stating, "We have organized events for women but never participated." Conversely, a respondent from Maharashtra College, also serving as the student president of WDC, disclosed, "Our college WDC organizes events 2-3 times a year, mostly on Women's Day or Balika Divas." The activities organized by WDC, as outlined by respondents, include lectures, workshops, seminars, debates on women's safety, hygiene, self-defence, and other pertinent issues.

#### **Confidence in College Response to Sexual Harassment Incidents**

When questioned about the likelihood of filing a formal complaint in the event of sexual harassment or violence on campus, most respondents expressed a willingness to report such incidents. However, a minority cited concerns about potential embarrassment and the perceived lengthy process involved in college complaints procedures. In assessing their college or university's response to reported incidents of sexual harassment and violence, respondents displayed varying degrees of confidence. Most



respondents believed that their institutions would take strict actions to address such matters. One respondent from Burhani College emphasized, "Our college takes strict action in such cases because they don't want to involve any police complaints, and they care about their reputation." Another echoed this sentiment, stating, "College is very strict and serious about such issues, including suspension and fines, with more preference and benefit of doubt given to girls in cases of sexual harassment and violence."

Echoing these sentiments, a respondent from Saboo Siddique College attributed the institution's vigilance to its religious minority status and the minority representation of girls in engineering colleges. Such colleges, the respondent noted, prioritize preventive measures and swift action against misconduct, particularly if it concerns female students. According to a respondent from Maharashtra College, the institution adopts a stringent approach, particularly concerning issues involving girls. The respondent attributed this strictness to the college's orthodox mindset, stemming from its status as a minority college. Another respondent praised their college's stringent safety measures, including extensive CCTV surveillance and regular teacher patrols. However, perceptions of potential leniency towards affluent students were also noted, suggesting a nuanced understanding of institutional dynamics.

### **All genders being treated equally in terms of opportunities and outcomes in the college.**

In response to inquiries about gender equality in terms of opportunity and outcomes in the college, most respondents asserted that all genders are treated equally. However, their perspectives predominantly revolved around binary genders of men and women. The respondents from Maharashtra College highlighted that opportunities and outcomes are equal for both boys and girls. They emphasized the absence of gender-based restrictions in elections for various positions like president, CR, GS, treasurer, and vice president, noting that this year, most of these positions were held by girls. Another respondent from the same college mentioned that boys and girls receive equal treatment, but with a nuanced observation. They pointed out in humorous way that girls are granted additional privileges, such as access to lifts, indicating a form of preferential treatment.

Similarly, another respondent noted that while both genders were treated equally, girls were even given preferential treatment, such as access to lifts. At Burhani College, respondents highlighted the absence of gender discrimination, citing examples like the existence of women's cricket teams alongside men's teams. In the context of engineering, typically considered a male-dominated field, a respondent from Saboo Siddique College noted that girls were given equal opportunities without discrimination, receiving priority in various aspects. At Wilson College, respondents affirmed that all genders, including non-binary individuals, were treated equally without discrimination or bias, fostering an environment where everyone feels safe and heard. One respondent particularly emphasized the college's prioritization of inclusivity, affirming that everyone, including non-binary individuals, was treated respectfully and equally. At Hinduja College, a respondent shared a positive example of inclusivity, citing the fair treatment of a gay friend by both teachers and students. A respondent from Elphinstone College, who identifies as bisexual, shared, "I am treated equally in the college. People know about my sexuality, but they act very normal and casual with me and do not make me feel excluded or different."

Some respondents indicated that both boys and girls are treated equally in the college but acknowledged their limited understanding of "other" genders, as they recognize only two genders. One respondent stated, "According to respondent's understanding, there are only two genders." However, some respondents refrained from commenting on non-binary individuals' treatment, acknowledging their limited visibility on campus as they have never seen anyone apart from male and female in the college and suggesting that they might feel hesitant to openly express their identity.

**Statements like Women physically weak, emotional and being trans is not normal.**

When questioned about common gender stereotypes, most respondents acknowledged hearing statements portraying women as physically weak and emotional. Some respondents mentioned hearing such remarks directed at their sisters but perceived them as light-hearted banter. For instance, one respondent stated, "They said these to their sisters, but it was in a fun way." Another respondent expressed a belief that women are genetically weaker and more emotional than men, attributing these traits to them. Upon inquiry about hearing other inappropriate statements, one respondent's response reflected a lack of awareness about the inappropriateness of such remarks. They questioned the notion of inappropriateness and defended the statements as "right and true." Conversely, a few respondents contested the idea of women being physically weak. One respondent noted, "I have seen my female friends giving tough competition to men in gyms." However, they still acknowledged the perception of women as emotional. A small number of respondents who are aware of non-binary individuals reported hearing statements suggesting that being transgender is not normal. This indicates a limited understanding and acceptance of gender diversity among respondents.

**Gender Component in Syllabus Across Disciplines**

Respondents provided varied insights regarding the presence of gender components in their academic syllabi.

- **Engineering Backgrounds:** Many respondents from engineering backgrounds reported a lack of gender components in their syllabi. This absence may contribute to limited awareness about gender and sexuality issues, as indicated by a respondent who stated, "As a civil engineering student, we don't have any gender or women component."
- **Commerce and Management Fields:** Some respondents in commerce and management programs noted a deficiency in gender components, they had few gender component particularly in subjects like FC in the form of women's rights and development. However, respondents from institutions like Hinduja College demonstrated a notable understanding of gender-related concepts, including knowledge about Women's Development Committees (WDCs) and Internal Committees (ICs).
- **Humanities Disciplines:** Respondents in humanities disciplines, such as sociology, psychology, and political science, frequently reported the inclusion of gender components in their syllabi. They highlighted topics like western political thought, feminism, women's empowerment, and LGBTQIA++ movements like #METOO and PINJARA TODH covered in their coursework. While the other Arts respondents mentioned gender components, particularly in FC subjects like women's rights and development.
- **Sciences:** While respondents from TY sciences indicated a lack of gender components, those in FY and SY science programs reported some inclusion of gender topics in FC subjects.

**Recommendations for Creating a Gender-Friendly Campus**

In response to the question, the majority of respondents emphasized the necessity of establishing a functional complaint committee. One respondent highlighted a discrepancy between theoretical programs and the actual implementation of committees mentioned in documents, pointing out a lack of practical application. They stressed the importance of accessibility and swift resolution in such committees. Additionally, respondents underscored the need for enhanced security measures. Many students from Maharashtra College recounted numerous instances of violence perpetrated by outsiders gaining access to the campus and causing disturbances. Another respondent recounted an incident

during the college's annual fest where a conflict erupted between groups of girls and boys. However, the principal intervened promptly, and strict action was taken against the guilty party, resulting in suspensions. Another suggestion proposed by the respondents is to conduct gender-sensitive workshops and incorporate gender courses into the curriculum. They believe that raising awareness through timely courses and workshops is essential. Additionally, counselling services were recommended. Some respondents suggested counselling sessions for parents, highlighting their lack of understanding of gender dynamics. Others advocated for counselling services for students and teachers, noting a need for improved sensitivity and understanding among educators. Lastly, some respondents proposed the segregation of campus spaces for boys and girls as a solution to issues of sexual harassment and violence. One respondent argued that separating girls and boys on campus would resolve such issues. They mentioned instances where students are not allowed to sit with the opposite gender for extended periods, and male students are instructed by teachers to maintain a safe distance from female students.

### **Queer support group**

The term "queer" elicited surprise from most respondents, with many hearing it for the first time, while some confused it with "peers." The majority stated that their college does not have a queer support group, while others expressed uncertainty about its existence. However, respondents from Wilson College mentioned the presence of a queer support group on their campus.

### **Understanding Gender and Sexuality**

When questioned about gender and sexuality, most respondents displayed a mix of emotions ranging from surprise to amusement. Some seemed puzzled by the question, while others responded with a smile, indicating that their gender was apparent from their appearance. Responses like "*kya dikh raha hoon*" (what do I look like) and "obviously a woman" were common. While there was some awareness about gender diversity among respondents, sexuality was a relatively new concept for many. Upon hearing the term "sexual orientation," some respondents smiled wittily, and during group discussions, there were exchanges of laughter and glances among participants. Most respondents were unfamiliar with specific sexual orientation terms, with only a few mentioning asexual, bisexual, and homosexual or just saying we are 'straight', primarily based on what they had heard or observed. These terms were more familiar to respondents who had friends of non-normative genders.

### **Some Important Themes**

**Perspectives on College Safety and Awareness:** A notable aspect of the respondents' feedback is the lack of consensus regarding the college's efficacy in ensuring safety and educating against sexual harassment and violence. While some respondents expressed confidence in the college's efforts, citing security measures at the gates, others adopted a more critical stance. One respondent aptly pointed out that safety encompasses not only physical security but also mental well-being, highlighting the multidimensional nature of safety concerns on campus. Furthermore, respondents expressed scepticism regarding the effectiveness of educational campaigns against sexual harassment and violence. Many indicated that they had not witnessed any awareness initiatives or campaigns on campus, and some noted the absence of notice boards outlining guidelines and policies related to such issues. Interestingly, most respondents who expressed disagreement were predominantly male and had negative experiences involving professors and staff members, influencing their perceptions of the college's commitment to addressing safety concerns and promoting awareness.

**Self / Professor -Reliance versus Seeking Support:** A notable finding from the responses is the inclination of a significant portion of respondents, primarily male, to handle instances of sexual harassment and violence on their own without involving anyone else. This self-reliant approach highlights a reluctance among some respondents to acknowledge the prevalence of sexual harassment

against men and the need for support mechanisms. Interestingly, many of these respondents expressed doubts about the occurrence of sexual harassment against men, attributing it primarily to women's experiences. Statements such as "men are always the perpetrator" and "men never get uncomfortable" reflect societal norms and stereotypes surrounding masculinity and vulnerability. These perceptions may contribute to a reluctance among men to acknowledge their experiences of sexual harassment and seek support. Most respondents from various colleges indicated that they would directly approach the principal and professors instead of the WDC/IC because they perceive them to be more accessible and approachable. This preference contributes to the unpopularity of WDC/IC in colleges and hinders their effective functioning.

**Subdued Discourse on Sexual Harassment in Colleges:** Discussion of sexual harassment is notably subdued in colleges, as evidenced by respondent's language choices. Instead of directly addressing "sexual harassment," many respondents opted for terms like "these issues," "sensitive issues," and "misconduct." One respondent even noted, "Sexual harassment is not openly discussed in college as it is viewed as a personal problem linked to family honour and dignity."

**Understanding of WDC and IC:** While respondents exhibited more familiarity with WDC compared to IC, awareness of both was generally limited. Among those familiar with WDC, knowledge varied from mere acknowledgment of its existence to a deeper understanding of its functions and roles. However, awareness of IC was notably rare, primarily among students involved in student committees or the IC itself. The activities organized by WDC drew the participation of nearly half of the respondents, with a noticeable majority being girls. This gender disparity in participation may be attributed to the perception in many colleges that WDC activities are exclusively for girls. Interestingly, some respondents noted that their college WDCs lacked male members. These activities typically coincide with special occasions like Women's Day or Balika Divas and include a variety of events such as fun games, lectures, seminars on women's safety, and self-defence workshops.

**Confidence in Formal Complaints:** Most respondents expressed their intent to file a formal complaint and showed confidence in their college's capacity to address such issues, referencing past instances where the college took decisive action. Some respondents associated the college's strict policy against such behaviour with its status as a religious minority institution, emphasizing the value placed on women's welfare and adherence to cultural norms like '*parda*'. Others attributed the college's proactive stance to its commitment to maintaining its reputation.

**Perceptions of Gender Equality Across Colleges:** Respondents across various colleges expressed differing perspectives on gender equality. While some affirmed that their colleges treat both boys and girls equally, others seemed unsure when it came to acknowledging all genders, expressing confusion about non-binary individuals. Notably, respondents from Hinduja and Wilson colleges stood out for recognizing and affirming equal treatment for all students, including binary and non-binary individuals. They cited instances where non-binary friends were treated respectfully. This highlights the diversity in understanding gender and sexuality across different colleges.

Conversely, colleges like Maharashtra, Burhani, and Saboo Siddique, which belong to religious minority communities, often lack understanding of gender diversity and adhere strictly to binary terms. Respondents from these colleges cited religious beliefs as the reason for acknowledging only two genders, expressing no ill intent toward individuals of other identities. Meanwhile, Elphinstone, being a government college, showed less interest in addressing gender diversity issues. In contrast, colleges like Hinduja and Wilson demonstrate a proactive approach in considering and respecting diverse gender identities. The observation underscores the significant impact of institutional influence. Colleges, functioning as microcosms of societal values and norms, play a pivotal role in both mirroring and

perpetuating prevailing social attitudes and structures. How colleges navigate the issue of gender equality offers valuable insights into broader social norms and cultural dynamics.

### **"Gender Segregation: A Solution for Sexual harassment?"**

Some respondents mentioned that they have been advised to maintain a distance from girls while on campus. A respondent from Burhani College stated, "Our teachers have advised us to maintain a safe distance from girls, and sitting together for too long is not allowed." Another respondent suggested that segregating boys and girls in colleges could address such issues, adding, "There is always a risk of problems when boys and girls interact freely. Our college, being a Muslim college, has historically upheld this segregation, as his father also graduated from the same college in 1996 when proper segregation was in place." Respondents from Maharashtra College highlighted the practice of professors conducting rounds on campus 2-3 times a day to ensure that students maintain distance and do not exceed certain limits. As a former student of Maharashtra College, I can confirm this practice. However, these observations raise concerns about moral policing in educational environments and whether increased supervision is an effective solution to these issues.

In conclusion, the findings underscore a concerning lack of awareness regarding formal committees like WDC and ICs, tasked with ensuring the safety of individuals within educational settings. Despite existing protocols on paper, there is a noticeable gap in their implementation within colleges. While instances of sexual harassment may not be rampant in the selected colleges, there remains a glaring absence of discourse on such critical issues. The POSH Act of 2013 expressly condemns such occurrences, recognizing them as violations of fundamental rights enshrined in Articles 14, 15, and 21 of the Constitution, particularly the rights to gender equality and liberty. To effectively address these issues, integrating a gender component into college syllabi emerges as a crucial step forward. It's evident from the research that mere existence of WDC and ICs isn't sufficient, as participation in their activities remains low. By embedding discussions on gender equality and sexual harassment within academic curricula, colleges can foster greater awareness and engagement among students. Such proactive measures are essential in bridging the gap between policy and practice, ultimately creating safer and more inclusive educational environments for all.

It is important to note that the research findings are specific to the selected colleges and cannot be generalized across all educational settings. While they reveal significant gaps in awareness and implementation of policies regarding sexual harassment and violence, they don't represent the entire educational landscape. Moving forward, broader research is needed to understand these issues across diverse institutions. By adopting a more inclusive approach, we can develop insights that inform targeted interventions and foster meaningful change within educational environments.

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## Author Index

### A

Ayeshna Dutta	...01
Abhishek Vinkare	...24
Alina Syed	...32

### H

Heta Purohit	...38
--------------	-------

### M

Miraya Kanchan	...08
----------------	-------

### P

Pragat Thawani	...43
Pratibha Shah	...49

### S

Sadiya Shaikh	...19
Sana Ansari	...55

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