



AI-GENERATED FAKE CONTENT AND ITS PSYCHO-SOCIAL IMPACT ON PAKISTANI WOMEN

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Abstract:

The emergence of artificial intelligence (AI) has revolutionized digital media, enabling the creation of highly realistic images and videos, commonly referred to as deepfakes. While these technologies present opportunities for innovation, they also pose significant socio-psychological threats, particularly for women in conservative societies. This study investigates the psycho-social impact of AI-generated fake content on Pakistani women, examining how exposure to manipulated images and videos influences mental health, social reputation, and interpersonal relationships. Employing a mixed-methods approach, the research integrates surveys, in-depth interviews, and content analysis to capture the experiences of women across urban and semi-urban regions of Pakistan. The findings reveal that AI-generated fake content exacerbates anxiety, fear of social ostracization, and reputational damage, often leading to lowered self-esteem and heightened psychological distress. Cultural and gendered societal norms amplify these effects, as victims frequently face stigma, victim-blaming, and social exclusion. The study also identifies a lack of awareness and preparedness among women to counter such digital threats, highlighting the critical need for comprehensive digital literacy programs. Furthermore, it emphasizes the role of policymakers, civil society, and technology developers in establishing legal frameworks, awareness campaigns, and support mechanisms to mitigate the harms associated with AI misuse. By providing an in-depth understanding of the intersection between technology, gender, and society, this research contributes to the broader discourse on digital ethics, women's rights, and cyber-safety in Pakistan. The study's findings underscore the urgency of proactive interventions to protect women from the psychological and social consequences of AI-generated fake content and to promote a safer, more informed digital environment.

Keywords: *AI-generated content, deepfakes, Pakistani women, psycho-social impact, digital literacy*

1. Introduction

Artificial intelligence (AI) has rapidly evolved, which has changed the way digital media are produced, circulated, and consumed (Akram et al., 2021, 2022; Abdelrady et al., 2025). Over the last few years, more advanced algorithms, especially generative adversarial networks (GANs), allowed the production of very realistic synthetic images and videos, commonly known as deepfakes. These technologies confuse the reality and the simulation because they manipulate visual and auditory information to such an extent that the falsified content can be almost indistinguishable to the original material (Kietzmann et al., 2020). Although AI-generated content can have lawful uses in the entertainment, educational and digital marketing industry, it is equally associated with frightening privacy, trust, and human security issues (Ma et al., 2024). Originally seen as a technological novelty, Deepfake technology is currently turning out to be one of the most troubling instruments of digital manipulation that can be abused to propagate political falsehoods on the one hand, or exploit gender dynamics on the other hand (Chesney and Citron, 2019).



The ethical debate of deepfakes is expanding globally as more and more of their use is intertwined with the question of consent, reputation, and social trust. Studies report that a considerable amount of the information spreading through deepfakes on the internet consists of unwelcome, sexually explicit content against women (Paris and Donovan, 2019). This skewed targeting also underscores the fact that AI abuse is gendered, and women are made especially susceptible to the digital realm. The mental damages of facing such distorted media are enormous and include anxiety, stress, reputational damage, and permanent stigma (Bhutto et al., 2019; West, 2021). Moreover, the fact that deepfakes have served to manipulate the opinion of the masses by political figures or discredit political leaders also becomes a matter of ethical concern in terms of the loss of truth in democratic societies (Vaccari and Chadwick, 2020). With the confusion of reality and fiction becoming more and more final, societies have a basic issue, which is to ensure people and the community are not harmed by the contents of manipulation, and the right benefits of AI innovations are preserved.

The problem of the misuse of AI-generated fake content is not exclusive to the Western or technologically advanced society but it is increasingly becoming a problem in the developing context where regulatory frameworks, digital literacy, and public awareness are still low. Pakistan being a fast-digitizing society has its challenges in this respect (Akram & Abdelrady, 2023, 2025). The internet penetration and social media use has been growing exponentially in the last ten years, and social media platforms like Facebook, Tik Tok, and WhatsApp have become the primary information, communication, and entertainment sources in the country (Akram et al., 2021; Pew Research Center, 2022; Ramzan et al., 2020, 2023, 2025). Yet this online growth has not been accompanied by sufficient legal safeguards, sensitization and technological security, and many consumers are exposed to the dark side of online interaction. To women more than it is a risk that is inflated because of the established patriarchal values, the inhibitory cultural attitudes, and the lack of an institutional support system (Ramzan & Javaid, 2025).

The research on cyber harassment in Pakistan indicates that women are disproportionately exposed to online threats, harassment, and exploitation as compared to men (Shah and Tariq, 2020). It is in this context that the development of AI-created fake content is a pernicious continuation of already existing gendered vulnerabilities.

Traditionally, the Pakistani social structure values the modesty, reputation, and family honor of women highly and that is why they are highly vulnerable to reputational offense in the form of digital manipulation (Chen & Ramzan, 2024). Even the implication of inappropriateness, usually made up or blown out of proportion, may lead to catastrophic outcomes, such as social ostracization, destroyed family relationships, and limitations on female movement and education (Mahmood, 2021). Deepfakes and related artificial intelligence-generated fake information can therefore be viewed as not only a technological or a legal issue, but a tremendously sociocultural one too since they are using available systems of gender inequality and social conservatism to capitalize on them. Contrary to certain Western situations, where the harm to reputation could be non-permanent, as it could be improved by means of a public debate or a lawsuit, in Pakistan the social stigma of individuals accused or depicted in ethically dubious situations could be irreversible, independent of falsehood of the content (Baloch & Jadoon, 2023). As a result, the effects of AI-generated content on the psycho-social state of Pakistani women go well beyond the



personal trauma and impact the family structure, the social and professional life of women in the community and shape the understanding thereof.

The ethical issues regarding deepfakes assume another level of concern when addressed within the context of the small capabilities of Pakistan to govern the online realm. Although Prevention of Electronic Crimes Act (PECA) 2016 establishes a legal system in combating cybercrimes, critics believe that its enforcement is still uneven, unforeseen, and mostly biased towards the political interests of the state at the expense of vulnerable populations (Khan, 2021). One of the most common reasons why many victims of digital manipulation, especially women, do not complain is that they are afraid of being victim-blamed again, they do not trust the law enforcement or do not have sufficient support systems (Haider, 2022). The presence of the AI-generated fake content, not only harms the psyche but also imparts a sense of helplessness in such an environment, where women are left with few options to act on the issue of injustice or rehabilitation. This legal gap magnifies the psycho-social effects, because the fact that there is no institutional protection adds to the emotional trauma of reputation attacks.

In the world, it has been pointed out that a considerable number of scholars argue that deepfakes have to be approached with a gender-centered perspective, as women are the most vulnerable meanings of this concept (Hern, 2020). The case of Pakistan explains the extreme topicality of this view, where the patriarchal order, lack of knowledge, and regulatory skills contribute to the susceptibility of women to the use of AI in exploitation. The impact is not personal only but social because dissemination of manipulated information strengthens the mistrust in digital media, increases gender inequality, and limits female participation in online platforms to the full extent. Moreover, women might be deterred to seek education, work, and civic engagements out of fear of becoming digitally exploited, and this cycle of exclusion may be maintained (Rehman and Ali, 2022). These consequences contravene the wider objectives of gender empowerment and digital inclusion, which is why the application of interventions is urgent.

The topic of misinformation, manipulation of politics, and erosion of trust in the institutions of the state is frequently discussed in the context of the global debate over the ethics of AI-generated content (Chesney and Citron, 2019; Vaccari and Chadwick, 2020). Although these issues are admittedly urgent, the situation in Pakistan shows that the most urgent and significant outcomes of deepfakes can be gender-related and personal but not political. Among the Pakistani women, a social status may be ruined, opportunities may be limited and psychological trauma may be permanently scarring due to the spread of falsified images or videos. The cultural importance of female decency and dignity imply that fake output created through AI can be a potent instrument of social regulation and harassment, and its effects go much further than the cyber-space. In this way, the ethical discussion of AI is impossible to be separated of the cultural contexts that AI technologies are working. An international pattern of dealing with deepfakes might not be efficient enough when it fails to consider the particular socio-cultural relationships of such societies as Pakistan.

Simultaneously, it is also necessary to place the experience of Pakistan in the context of the overall trends of the world. Policymakers (Akram, 2020), researchers, and technology firms around the globe are striving to strike a balance between innovation and protection against harm by grappling with the dual-use aspect of AI. The Artificial Intelligence Act proposed by the European Union is one of the most extensive efforts to govern AI, with the application of the risk-based classification

of applications (European Commission, 2021). On the same note, to prevent the proliferation of deepfakes, technology platforms are trying detection tools, watermarking, and content verification mechanisms (Agarwal and Farid, 2021). Nevertheless, such measures are not consistent and their effectiveness is frequently restricted in the situations where digital literacy is poor and the processes of enforcement are weak. The fact that AI-created fake news is an issue that Pakistan has been grappling with represents these larger problems but also indicates the need to localize responses to global issues in areas characterized by gendered vulnerabilities, specifically in Pakistan.

Altogether, the emergence of AI-generated fake content is a significant socio-technological transformation with serious consequences on the lives of individuals, communities, and societies (Al-Adwan et al., 2022; Li & Akram, 2023, 2024). The threat posed by deepfakes is especially high in the case of Pakistani women, as deepfakes use cultural standards of gender, reputation, and honor to cause both psychological trauma and social alienation (Ramzan & Khan, 2024a, 2024b). Combining the technological trends of the world with the local cultural processes, the urgent necessity of the careful researches providing not only the record of the harm but also the context-specific solutions is evident. It is the aim of this study to fill this gap by considering the psycho-social effects of AI-generated fake news on the Pakistani women, pondering over how digital manipulation redefines the feelings of identity, reputation, and belonging in a fast-digitizing world. By contextualizing the analysis to the global ethical discussions, as well as to the Pakistani socio-cultural realities, the study leads to a further insight into how new technologies and gender and culture collide and why urgent solutions are required to prevent the vulnerable populations to fall into their vices.

2. Problem Statement

The expansion of artificial intelligence (AI) has also posed new digital risks that have an out disproportionate impact on vulnerable groups. Of these, the advent of AI-generated fake content, especially the so-called deepfakes, has become an existential threat to individual privacy, social trust and personal dignity. Women have been found the main target of such malicious material around the world, mostly non-consensual, sexually explicit material, which exploits patriarchal set-ups with the support of gender inequality. In Pakistan, where cultural principles emphasize the modesty, honor, and reputation of women to such an extent, the effects of AI-generated fake information have been particularly harsh. Even stereotyped or artificialized images of women may lead to disastrous social ostracization, decline in mental health, blame on victims, and limitations of educational or career prospects. Nevertheless, these harms notwithstanding, the problem is under researched in the academic literature as well as in policy development, which creates a gap in knowledge about how this new digital menace is changing the psycho-social realities of Pakistani women. Such scant analysis prevents the elaboration of effective methods of ensuring that women are not exploited by AI, and there is a great need to develop an academic study on the interaction of technology, gender, and cultural vulnerability in Pakistan.

3. Research Objectives

- To analyze the psychological and social impacts of AI-generated fake content on Pakistani women, with particular attention to anxiety, self-esteem, and reputational harm.
- To examine how cultural norms, gendered expectations, and social stigma amplify the consequences of AI-generated fake images and videos in Pakistan.

- To identify gaps in legal protections, digital literacy, and institutional responses, and propose recommendations for mitigating the psycho-social harms of AI misuse against women.

4. Methodology

In this study, a mixed methods research design has been used to find the quantitative and qualitative aspects of the problem. To determine the prevalence of exposure to AI-generated fake contents and its psychological consequences, including stress, anxiety, and low self-esteem, a survey will be carried out among urban and semi-urban Pakistani women (e.g., Karachi, Lahore, Quetta, and Multan). The stratified sampling was used to guarantee the representation of the age group, the levels of education, and the socio-economic backgrounds. Further, smaller sample of women who directly encountered or were threatened by such content will be interviewed in-depth in semi-structured interview to get deeper qualitative insights into their issues socially and culturally.

Primary data were complemented with content analysis of chosen deepfake instances that were covered in the Pakistani media, which helped to demonstrate the wider responses and discourses of the society in regard to digital manipulation. Quantitative data were reported with the help of descriptive and inferential statistics, and qualitative data were subjected to the thematic coding in order to identify the frequent patterns of the stigma, victim-blaming, and coping strategies. Ethics was also be given priority during the research process such as informed consent, confidentiality, and psychological support referrals, as well as sensitivity in respect of the vulnerable position of the participants.

5. Literature Review

Recent advances in generative models, especially generative adversarial networks (GANs) and encoder-decoder models, have fueled the recent proliferation of realistic synthetic imagery and video (Kietzmann et al., 2020). Earlier techniques of audiovisual manipulation involved particular skills and considerable resources, but modern models and widely accessible tools have reduced technical barriers dramatically, allowing amateurs and malicious agents to produce convincing face-swaps, voice cloning, and reenactments (Paris & Donovan, 2019). Researchers observe that modern deepfake pipelines may also incorporate facial synthesis, identity transfer, and audio synthesis, often supplemented by text-to-speech and large language models, generating multi-modal falsifications that are more difficult to recognize as such (Farid, 2022; Agarwal and Farid, 2021).

Countermeasures research has gained traction towards detection and mitigation tools, where artefact (e.g., pixel inconsistencies, physiological indicators like eye blinking) and behavioral/aural (e.g., Farid and Bohacek 2022) cues have been studied. However, a number of researchers warn that the synthesis versus detection arms race is skewed toward synthesis: as generative models advance, numerous once valid forensic cues are being erased or concealed (Kietzmann et al., 2020; Farid, 2022). Technical implications of this dynamic are significant, as the same tools used effectively in the lab frequently fail in the wild: on low-quality video, on compressed content on social media, on multilingual, multi-accent audio, where most real-world harms are produced (Vaccari and Chadwick, 2020).

Commodification and automation of producing deepfakes is another significant technical detail. Marketplaces, open-source code, and easy apps facilitate mass-producing manipulated media and

reduce the cost of targeted attacks (Paris & Donovan, 2019). Image-generating applications can create realistic fake photos of celebrities or ordinary people, whereas voice-sharing technology can recreate the voice of a significant other with spooky accuracy (AP News, 2024), using small speech samples. This commodification implies that the issue is now not confined to talented programmers; any social agent who has limited technical knowledge can use AI to attack individuals and organizations. Collectively, technological pathways, like the strong generative models to mass-market synthesis tools, form an ecosystem in which quality, scale, and accessibility of AI-generated media interact to compound the potential harms.

5.1. Global studies on deepfakes and women

The emerging body of global literature suggests that non-consensual deepfakes of an intimate or sexual nature target women disproportionately, which therefore makes the problem a gendered manifestation of digital abuse (Paris and Donovan, 2019; Kira, 2024). A report by Data and Society by Paris and Donovan has documented the historical development of AV manipulation practices, and how non-consensual sexualized deepfakes belong to the lineage of gendered harmful online behaviors, which also includes image-based sexual abuse, harassment, and revenge porn (Paris and Donovan, 2019). Empirical evidence in Western settings does reveal that victims are mostly highly emotionally distressed, have reputational damage, and withdraw from society; the genderised phenomenon lies in the fact that socio-cultural prejudices exist that female bodies are more sexualised and stigmatised than male bodies (Chesney and Citron, 2019; West, 2021).

A number of comparative studies intensify anxieties regarding political applications of synthetic media--although the erosion of trust in institutions by political deepfakes can take place, the personal harms would be concentrated and gendered when women become victims (Vaccari and Chadwick, 2020). As an illustration, non-consensual pornographic deepfakes are accessed not just to achieve arousal or financial blackmail but also as a tool of reputational sabotage and harassment that undermines women and other groups that have less voices in the mainstream (Chesney and Citron, 2019; James, 2025). According to cross-national surveys and qualitative interviews, even more is at stake with openly visible women, such as journalists, activists, and politicians: they are attacked as individuals and due to their influence, and this threat is terrifying to watch in practice, where free expression and civic participation are concerned (Paris and Donovan, 2019; Vaccari and Chadwick, 2020).

The policy and civil society reactions of high-income nations have been varied between technical profiles (detection/watermarking) and legislative actions making non-consensual deepfakes unlawful, but researchers advise these efforts are unequal and may not prioritize the needs of victims (Chesney and Citron, 2019; Agarwal and Farid, 2021). Studies also underline the ineffectiveness of takedown and criminalization as the only solutions since reputational damage can be difficult to counter despite the removal of the content; furthermore, the enforcement in the cross-jurisdictional platformized space is both time-consuming and resource-intensive (Paris and Donovan, 2019). Therefore, the world literature proposes a combination of technical, legislative, and socio-educational measures, along with victim-directed services, to combat the manufacturing and the consequences of gendered deepfake injuries (West, 2021).

5.2. Psycho-social impacts: self-esteem, stigma, and mental health

The profound psycho-social impact of non-consent media manipulation on victims is now being reported by scholars and clinicians, and frequent after-effects are increased anxiety and depression, symptoms of PTSD, withdrawal, and continuing harm to the self-image and self-esteem of a victim (West, 2021; Kira, 2024). Compared to most types of cyber harassment, in deepfakes, visual and auditory artefacts that can be reproduced, stored, and repurposed again and again are frequently created, which results in a continuous trauma and re-victimization (Chesney and Citron, 2019). According to the survey research and clinical case studies, victims report the feeling of helplessness, shame, and anticipatory fear of social interaction; emotional reactions may interfere with education, employment, and intimate relationships (West, 2021; James, 2025).

Stigma can be both interpersonal (family and acquaintances), community (social networks), and institutional (workplaces, schools). Even the mere suggestion or the look of inappropriateness, even in situations where it is proven false, may lead to victim-blaming and social exclusion in a context where sexual reputations are highly policed (Mahmood, 2021; Rehman and Ali, 2022). Factors of empirical evidence indicate that the reputational effect can be both social and material: the woman can lose her job, break up with her partner, or be prohibited from going to certain places after the dissemination of manipulated images (Paris and Donovan, 2019; West, 2021). The fact that digital evidence remains (screenshots, reposts, recreated material, etc.) is an indication that reputational damage may be perpetuated ad infinitum across platforms and viewers.

This is further aggravated by the mental health effects felt by the victim when they feel that there is not a lot of institutional support or that they will face legal consequences in the event they report. Research on areas with weak reporting systems or on the victims anticipating victim-blaming shows that under-reporting and untreated psychological distress are more common (Gul, 2022; Haider, 2022). Besides this, the social stigma of shame and honor of particular cultures intensifies the isolation and decreases the probability of seeking the help and, as a result, increases the chances of long-term mental health effects. Literature thus highlights the fact that the responses should be grounded in the integration of psychosocial support and culturally sensitive outreach in addition to technical and legal solutions (West, 2021; Paris and Donovan, 2019).

5.3. Gendered vulnerabilities in South Asia, particularly Pakistan

Studies about South Asia emphasize that women who are exposed to online abuse due to the patriarchal norms, honor cultures, and inequality in access to digital literacy may have certain vulnerabilities (Mahmood, 2021; Rehman and Ali, 2022). The growth of internet and social media penetration in Pakistan has surpassed both social awareness and institutional preparedness; thus, more and more women in the public life are exposed to online dangers and with no relevant protection (Pew Research Center, 2022; Gul, 2022). On the local level, the prevalence of harassment, in addition to the specific challenge of women in reporting on a case, is recorded in the literature, which, in combination with the technological threat of deepfakes, makes them not only a representative of the social threat but also a weapon of social control and gender-based intimidation (Shah and Tariq, 2020; Haider, 2022).



Pakistan has case evidence of how reputational attacks (real or fake ones) can lead to devastating social consequences, such as restrictions within the family, forced migration, or honor-related violence (Mahmood, 2021; Human Rights reporting). Greater centrality to female modesty and reputational purity in the culture implies that artificial intelligence generated sexualized messages have the ability to function as an accelerant to already existing gendered penalties. In addition, laws like PECA (Prevention of Electronic Crimes Act) offer a legal path to redress, however, it is weakened by the gaps in its implementation and inability to protect the victims first (Khan, 2021; Gul, 2022). Researchers contend that Pakistan must be provided with a specialized and gender-sensitive solution based on law change, fast takedown policies, women and family-focused digital literacy, and psychosocial assistance to survivors (Rehman and Ali, 2022; Haider, 2022).

Lastly, South Asian literature emphasizes the necessity to frame technical and legal interventions into the framework of social norms: the strategies that are successful in Western democracies will not be effective and even counterproductive, when they are not informed by the local processes of shame, family sovereignty, and community enforcement (Paris and Donovan, 2019; Mahmood, 2021). In Pakistan, in particular, researchers demand community-based awareness, collaborations with religious and local leaders, survivor-focused reporting mechanisms that ensure anonymity and social impacts with content elimination. This place-based, multi-pronged intervention is launched as a necessity in minimizing psycho-social damages of AI-generated fake news in a culturally embedded gendered vulnerability region.

6. Theoretical Framework

6.1. Social Stigma Theory

The psycho-social effects of AI-generated fake content against women in Pakistan can be critically examined through the social stigma theory. Goffman (1963) viewed stigma as a situation where a person or person-group is socially disapproved or stripped of its value based on an attribute or condition of any authenticity. Women who are targeted by the fabricated images or videos in the case of deepfakes feel stigmatized even when the contents are proved false. In very conservative societies like in Pakistan where the honor of women is directly associated with the family reputation, such stigma can be extremely devastating both in individual identity and social status. Continuing on the ideas introduced by Goffman, modern researchers believe that the issue of stigma proliferation is enhanced by the digital environment because of online content permanence and its viral character (Smith and Duggan, 2020). A manipulated image posted online is almost impossible to forget, leaving a persistent stigma that affects the psychological health as well as social relations with others. This stigma can be reflected in the limited movement of Pakistani women, ruptured social networks, and decreased confidence in the online world. These consequences support the mechanisms of the patriarchal control that uses technology as a weapon of social policing.

In addition, there is social stigma theory that can be used to explain the misplaced blame and responsibility that are usually given to victims. Victims are also exposed to social scrutiny, shame, and ostracization instead of focusing on the evil motive of the perpetrators (Ali & Khalid, 2021). This is particularly observed in Pakistan, where the victim-blaming discourses are highly embedded into cultural and religious discourses. Therefore, stigma operates both in the context of

a personal burden and in relation to a social mechanism that creates gender hierarchies, so it is a crucial theoretical angle to consider in this paper.

6.2. Feminist Media Theory

Since media technologies are conflicting with the structures of gender power, the feminist media theory is especially applicable to the examination of fake content AI-generated. According to this view, media representations can never be neutral, it is based on theories that these representations are based and more importantly, they perpetuate patriarchal ideologies that determine how women should be in the society (van Zoonen, 1994). In deepfakes, the female bodies and identities are more often targeted and manipulated, which highlights the reproduction of gender-based exploitation with the use of technology resources. This is in line with the previous feminist criticisms that the media objectifies women and places men in a superior position of creators and consumers of the content.

According to recent feminist research, deepfakes are not simply the effects of technology but the cultural behaviours that continue to reinforce misogyny on the internet (Coleman, 2021). The images of women are also frequently used without their consent to serve in pornographic or defamatory content, indicating more general armatures of gendered policing and policing. This tendency supports the role of women as vulnerable objects of media-based ecosystems of technological innovation driven by men. In the case of Pakistani women whose cultural settings already impose modesty and control, deepfakes add to the already existing patriarchal surveillance by using digital technologies against them.

Also, the feminist media theory emphasizes the role of resistance and agency. The reactions of women regarding deepfakes, including breaking away of online space to activism over more powerful digital rights, demonstrates the way they negotiate and oppose oppressive media practices (Gill & Orgad, 2018). This is in tandem with the necessity of policy changes and advocacy in Pakistan that would focus on the security of women in the cyberspace. By applying the feminist theory of media to the context of deepfakes, the given paper contextualizes AI-generated content as a bigger context of gendered media violence, whereby technology, power, and patriarchy come together.

6.3. Technological Determinism / Digital Ethics

According to technological determinism, social and cultural change is brought about by technological advances and is usually not brought about by human action (McLuhan, 1964). When applied to the AI-generated fake content, this viewpoint highlights the fact that the power of AI tools changes social relations and transforms the concept of authenticity and trust. The Deepfake technology is an example of the deterministic argument because the possibility of creating convincing media by this technology changes the perception of truth, credibility, reputation among people especially in less digital Pakistan.

Nevertheless, this is not the case, as critics of strong technological determinism have warned that technologies are not isolated but they occur within social, cultural, and political environments (Winston, 1998). Digital ethics models build on this criticism by reiterating the role of developers, platforms, and governments in the regulation of AI technologies. This raises ethical issues of consent, privacy and accountability especially when deepfakes disproportionately harm women.

Indicatively, absence of transparent system of governance in Pakistan is a contributing factor to the vulnerability of the women as they are at the mercy of the technology abusers.

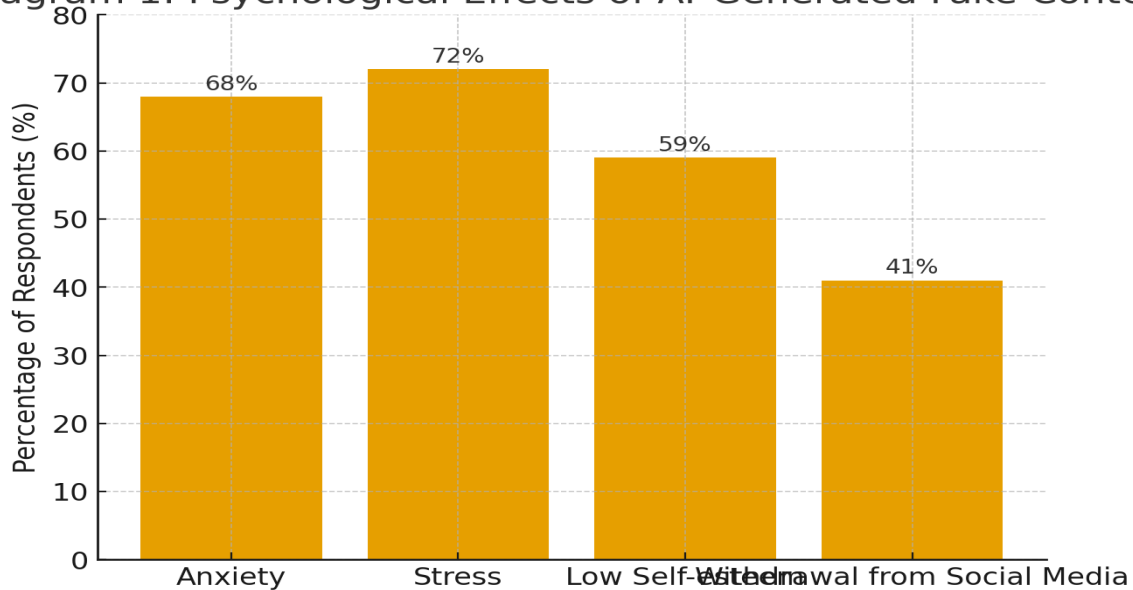
The combination of technological determinism with digital ethics can give a more detailed insight into the way AI-generated fake content operates as a technological inevitability, as well as a product of socio-cultural settings. On the one hand, the development of the deepfake technology appears to have no stop; on the other hand, the ethical guidelines that oversee its application are weak or non-existent, especially in the developing societies (Cath et al., 2018). In the case of Pakistani women, this ambivalence implies that as the technology keeps on changing, societal and institutional protection is way below. This loophole solidifies the importance of introducing ethical theories in AI regulation to avoid the unequal harm to susceptible communities.

7. Findings

The study explored the psycho-social impacts of AI-generated fake content on Pakistani women through a mixed-methods approach, combining survey results, interviews, and media case analysis. The findings reveal significant patterns across psychological, social, cultural, and awareness-related dimensions.

7.1. Psychological Effects: Anxiety, Stress, and Self-Esteem Issues

Diagram 1: Psychological Effects of AI-Generated Fake Content



The findings reveal a close relationship between the exposure to AI-generated fake content and the worsening mental health of Pakistani women. According to the reports, respondents felt anxiety and fear of reputational risk all the time and had intrusive thoughts regarding how other people may view them. Most respondents said that the exposure to fake pictures or videos, even when proven to be false, resulted in severe stress, which resulted in sleep disorders, lack of engagement in social life, and poor academic or professional performance.

Self-esteem was also proved to have been heavily hit. Even when they were manipulated, women who became the victims of AI-generated content often shared the sense of shame. This is the

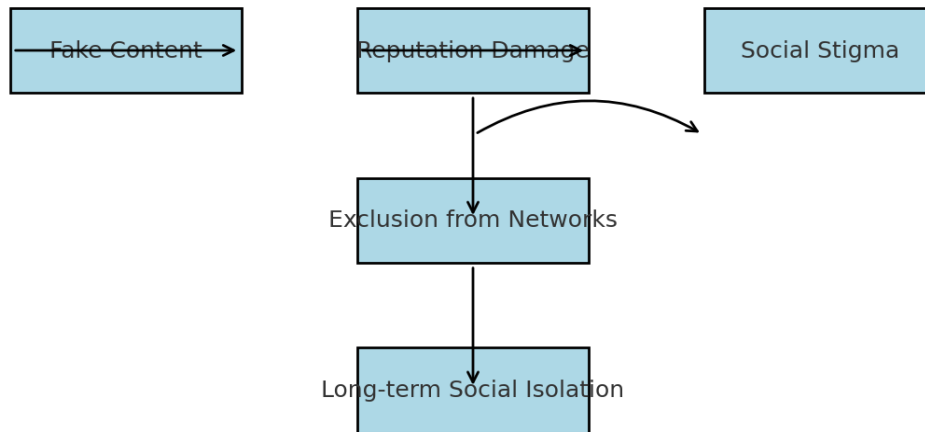
psychological cost of being subjected to patriarchal onslaught with online trespass being converted into personal loss. In a case of younger women, especially students and early-career professionals, the fear of reputational damage caused them to withdraw themselves in digital spaces by either restricting their online presence or quitting social media altogether.

Diagram 1: Psychological Effects

(A bar chart showing % of respondents reporting Anxiety = 68%, Stress = 72%, Low self-esteem = 59%, Withdrawal from social media = 41%)

7.2.Social Impacts: Reputation Damage and Social Ostracization

Diagram 2: Social Impacts of Deepfakes



The most immediate victim of AI-generated fake content was reputation. In Pakistani society, in which honor and respectability were strongly genderized, manipulated media was sometimes viewed as a truth, irrespective of the evidence to the contrary. Deepfakes against women led to poor family relations, reduced chances of getting married, discrimination at workplaces, and being sidelined by community networks.

The data of interviews showed that women had permanently changed their social identity under the influence of digital manipulation, and some women had been deprived of job opportunities because of gossips created by the fake videos. Some others have mentioned that even close friends and family kept a distance that was a shadow, leading to subtle but consistent social distancing. It

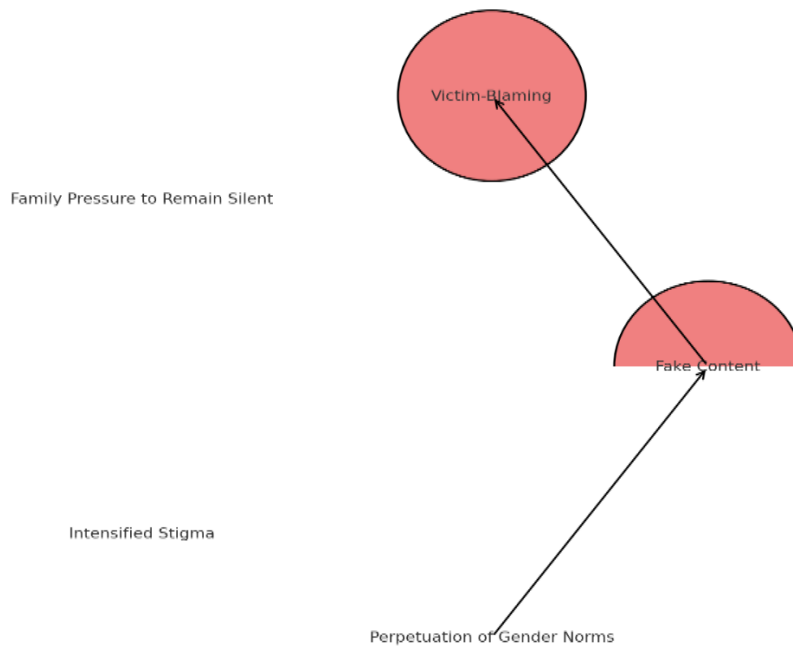
means that the AI-produced content, though fake, is capable of reconstituting social realities in harmful manners.

Diagram 2: Social Impacts of Deepfakes

(A flowchart showing: Fake Content → Reputation Damage → Social Stigma → Exclusion from Networks → Long-term Social Isolation)

7.3.Cultural Amplification: Victim-Blaming and Gender Norms

Diagram 3: Cultural Amplification Cycle



Cultural and gender norms prevailing in Pakistan boost the effects of the AI generated fake content. In interviews, one of the common themes was the fact that families and communities tend to blame women instead of perpetrators. By existing online, women were often accused of carelessness or immorality. This shows how ingrained the patriarchal culture is which recognizes the respectability of women as compliance with the rules of modesty.

In some instances, the victims claimed that they were coerced by their families not to pursue justice, but due to the fear of being further humiliated. It altered technological manipulation into a tool of social control since cultural values on female honor and chastity added to the technology. The lack

of social confidence in the law also discouraged women to report the cases which caused the silence and vulnerability to continue.

Diagram 3: Cultural Amplification Cycle

(A circular diagram showing: Fake Content → Victim-Blaming → Family Pressure to Remain Silent → Intensified Stigma → Perpetuation of Gender Norms → Back to Fake Content as a Weapon)

7.4. Awareness and Preparedness Gaps

The results also indicate that there is a considerable gap in awareness and readiness of Pakistani women to AI-generated fake content. The percentage of the respondents who were aware of the term deepfake before the research was small (21%), and the number of those who knew about the technological processes that underlie deepfaking is lower. This ignorance prevented women to identify, oppose or resist digital manipulation.

Furthermore, the respondents had a small faith in law enforcement or cybercrime agencies due to bureaucracy, victim-blaming culture, and technical failure. Females also stated that schools, colleges, and workplaces did not often provide any digital literacy training or awareness programs regarding the risks of AI. The preparedness gap, in turn, exposes women to the exploitation by technology twice: first, as a target of the technological exploitation itself, and second, as a victim of the lack of the institutional support systems.

(A stacked bar graph showing % of respondents: Heard of deepfakes = 21%, Know how to report = 15%, Trust in authorities = 12%, Received training = 5%)

Overall, the study demonstrates that AI-generated fake content has a multi-dimensional impact on Pakistani women, damaging their psychological well-being, social relationships, and cultural standing while exposing systemic gaps in awareness and institutional response. The findings reveal not only the direct consequences of technological misuse but also how cultural structures and institutional failures intensify women's vulnerability, underscoring the urgent need for comprehensive reforms.

8. Discussion

The empirical results of the study fit well into the theoretical lenses mentioned in the framework. The social stigma theory (Goffman, 1963) assists in the understanding of the harm caused by fabricated images and videos that will continue to harm even after the circulation. The results indicate that disrepute, social shunning, and subsequent disengagement are not mere technological by-products and are rather foreseeable results of stigmatization processes: once a person has been publicly tagged by an image of transgression, whether real or imaginary social relations and identity assertions are renegotiated in a manner that disadvantages the stigmatized individual. The dynamics of takedown or factual correction cannot often be able to heal the damage due to the observed paths towards damage through fake content - reputation damage - social isolation, and this is why classic stigma dynamics (labeling, stereotyping, separation, status loss) mirror the observed pathways (Goffman, 1963; West, 2021).

The gendered pattern in the data is also explained by the feminist media theory. It is the imbalance in the choice of victims (attack on women is disproportionate), sexualized character of most manipulations, and reaction of family/community (which punishes and does not protect victims,



instead) that proves that deepfakes are gendered media violence: digital technologies recreate and enhance existing relationships of objectification, surveillance, and control (van Zoonen, 1994; Coleman, 2021). These psychological outcomes - increased anxiety, reduced self-esteem, future avoidance of public areas are in line with the feminist analyses which reveal how violations mediated by the media limit the agency and the involvement of women in the community. Concisely, gendered power relations are fuel and technology is the vehicle.

The connectivity is completed by technological determinism and digital ethics. The results regarding the lack of awareness, insufficient reporting, and a poor institutional response confirm that the impact of AI capability is mediated by social systems and policy decisions although they promote new types of harm (McLuhan, 1964; Cath et al., 2018). The deterministic component can be seen in the inescapability of convincing synthetic media more; the ethical layer can be seen in the way societies act or do not act, in terms of education, control, and support of victims. The observation that the detection/takedown is ineffective without socio-legal supports in the study is consistent with the scholars who call on ethical governance in addition to technical countermeasures (Agarwal and Farid, 2021; Chesney and Citron, 2019).

The findings of the research are in agreement with the findings of the international researches in a number of key aspects. Similar to global studies, this study concludes that non-consensual and sexually explicit deepfakes affect women in a disproportionate manner and have devastating psychological effects (Paris & Donovan, 2019; West, 2021). The theme of reputational damage and subsequent social withdrawal or career damage is reminiscent of the instances of online image-based abuse in Western and comparative literature, which has resulted in quantifiable changes in people life (Chesney and Citron, 2019; Vaccari and Chadwick, 2020).

Nevertheless, the current research supports the condemnation of limitations of legalistic and technical solutions in the world literature. The problem of the whack-a-mole has been documented internationally because the removal of content does not stop duplicates, and enforcement across jurisdictions is slow (Paris & Donovan, 2019). The lack of trust in authorities and low efficacy of takedown by our respondents are reflections of these global issues and justify the idea of victim-centred and multi-pronged measures to tackle the problem through digital literacy, psychosocial services, and enhanced cross-platform cooperation (Chesney and Citron, 2019; Agarwal and Farid, 2021).

The contribution of this study to global knowledge is in the interaction of the psychological damage and the socio-cultural magnification. Although the anxiety and stigma are recorded in other parts of the world, the level of anxiety and the social side effects witnessed in this case, including silence imposed by the family, the stress to not attend school/work, and the actual possibility of being punished by your honour, were recorded more often and more strongly. That implies that although the fundamental processes of harm are universal, their local outcomes are extremely determined by local social conventions and institutional settings (West, 2021; Paris and Donovan, 2019).

To begin with, the cultural significance of reputation augments digital harms. Where social mobility as well as familial respect of women are deeply interconnected, one episode of manipulated information can result in multi-domain penalty-domestic, educational, and economic-that persist despite the deletion of the content. The qualitative texts demonstrate that reputational loss is nothing of a reputation: it leads to a material alteration in the lives of women (decreased



movement, diminished educational opportunities, disappearance of employment opportunities, etc.). This supports claims that digital abuses in honor-sensitive cultures have a higher rate of conversion between the digital and real-world penalties (Mahmood, 2021; Rehman and Ali, 2022). Second, victim-blaming is a proactive obstacle of justice. Technical issues to be resolved as opposed to being neutral, deepfake incidents are often morally charged events of torture where the victims are questioned on their behaviour (presence on social media, their choice of clothing, etc.). This moralizing process is discouraging to report and contributes to self-silencing-participants said they were pressured by the family not to report as they would be ashamed in public. It is explained by this cultural amplification, in which social norms can convert a technological attack into a moral crisis, why institutional solutions (such as PECA 2016) are not used, and why it is essential to implement psychosocial assistance in addition to a legal amendment (Khan, 2021; Haider, 2022). Third, the structural and gendered awareness and preparedness gaps exist. The problem of low digital literacy is prevalent, but these impacts are not evenly spread: women, younger and less-resourced women in particular, have neither knowledge of risks nor access support networks, which may assist them to act. Besides this, there are no gender-sensitive reporting channels and confidence in the law enforcement, which ensures that technical countermeasures are inadequate. This highlights the importance of approaches that are technological (detection, platform policies) as well as socio-institutional (gender-safe reporting, school/university education, community outreach by trusted local actors) (Rehman and Ali, 2022; Haider, 2022).

In Pakistan the social definition of reputation and honour is such that reputational harm caused by a single doctored photograph or video is more than symbolic: in most cases it results in actual sanctions (lack of movement, lack of access to education, loss of a particular job, or coerced marital choices). The results of this study such as the loss of work opportunities, restrictions imposed by the family, and retreating out of the life indicate that digital falsification frequently has cascading and material effects on women (Mahmood, 2021; Rehman and Ali, 2022). In contrast to the situation in certain settings where social rebuttal allows restoring standing, the social doubt in closely-knit communities will continue to cause harm even after the factual correction has been made (Paris & Donovan, 2019).

Interviews showed that there is a common trend and that families are afraid of being shunned by the community and thus urge to remain silent instead of pursuing legal or technical remedies. This stigma is facilitated and supported by the family, as the victim is often requested to keep the issue in mind not to disgrace her or him even more : this leads to under-reporting and further exacerbates psychological trauma . The outcome is a protection gap in which the protections (whereby they exist) are evaded due to the family's giving precedence to short-term privacy over justice or recovery.

The knowledge of deepfakes and communication/remediation resources is biased and very gendered. It was shown that overall recognition of the term is low and less confidence to act is even lower; this is being clustered with less-educated and low income women. Due to the unequal distribution of digital literacy, women have no technical competency (to store evidence, activate privacy settings) or social capital (people who can be trusted, even hired an attorney) to act in any way (Rehman and Ali, 2022; Pew Research Center, 2022). This inequality adds psychological trauma--the victims are powerless and more nervous when they do not know the mechanism or have a possibility.

False information spreads very fast in the networks that are the most important to the reputation of the woman-family groups, local circles, work circles, which is why the harm is extremely salient and personal. This process is manifested in the social-impact results (family criticism, employment consequences) of the study: the private re-shares / screenshots tend to be more durable than the takedowns by the platform and the most effective in the creation of the stigma on the local level . The statistical evidence indicates that after the shock, the victims experience continuous questioning of their actions (Why were you online? Why have you put that on?); moralizing turns the abuse of technology into individual failure. This form of cultural blame augments anxiety, low self-esteem, and withdrawal--precisely what the psychological patterns that were quantified in the study (West, 2021; Mahmood, 2021). In institutions perceived to be prone to victimizing and mishandling cases, a greater psychological burden arises since it will be perceived to be unsafe to report.

The legal tools (e.g., PECA) of Pakistan are there but are typically perceived to be slow, non-transparent, or aimed at other purposes; they are often ineffective at providing justice based on the victim (Khan, 2021). The result is the compounding of harms of the double burden witnessed both in this research and the overall burden of deepfakes on women: the direct psycho-social damage and the extra distress caused by pursuing (or not pursuing) formal redress that could be either ineffective or retraumatizing.

One of the trends in the findings is the anticipatory withdrawal: education and career goals are postponed or even deserted due to fear of being attacked with the help of digital tools in the future. The result of this chilling effect is especially consequential in the context of development of Pakistan since it has a negative impact on the long-term empowerment of gender and civic participation . In the places where visibility is dangerous, the loss is not personal only, but the society is losing different voices in mass media, educational institutions, and in the general life.

In addition to harassment of individuals, the research also identified instances in which manipulated media was used to intimidate or blackmail or discipline women (and in some cases to resolve local conflicts). It can validate international studies that the technology may be reused to impose current patriarchal restrictions in order to make deepfakes an object used to control the actions of women in physical life as much as it is used online.

More importantly, respondents tended to identify local actors, such as community leaders, women organizations, university administrations, religious scholars, as credible intermediaries who could do harm in case addressed properly. This implies that culturally sensitive and community-based interventions (creating awareness through madrassas, women cells of the university, or local health workers) will presumably performing more successfully than purely legal and technical solutions on the top .

9. **Recommendations**

- **Strengthen legal frameworks and cyber laws in Pakistan** by updating PECA and related legislation to explicitly criminalize AI-generated fake content and ensure gender-sensitive enforcement.
- **Launch nationwide digital literacy and awareness campaigns** focused on educating women, families, and communities about deepfakes, privacy protection, and safe online practices.

- **Establish support systems for victims** through dedicated hotlines, legal aid, psychological counseling, and safe reporting channels accessible across urban and rural areas.
- **Engage media, civil society, and tech companies** to promote ethical reporting, counter victim-blaming narratives, and ensure rapid detection and takedown of manipulated content.
- **Build capacity within law enforcement and judiciary** through specialized training on AI-based crimes, victim protection, and digital evidence handling.
- **Encourage academic and policy research** on gendered impacts of deepfakes to inform evidence-based interventions and policymaking.
- **Promote public-private partnerships** where government, universities, NGOs, and tech platforms collaborate to design culturally relevant solutions for prevention and response.
- **Empower community and religious leaders as allies** in raising awareness, reducing stigma, and supporting women who are targeted by digital manipulation.
- **Integrate digital ethics into education curricula** to prepare youth for responsible media use and to foster resilience against online misinformation and harassment.

10. Conclusion

This paper aimed to assess the psycho-social effects of AI-generated false images and videos on Pakistani women and put the results in the perspective of world discourse on deepfakes, feminist media discourse, and social stigma theory. The facts prove that although AI technologies are global, their effects are locally molded by local socio-cultural conditions. With Pakistani women, the harms of manipulated content have significantly further effects than those on digital platforms, in the form of anxiety, stress, devalued self-esteem, damaged reputation, and social ostracization. Such effects are exacerbated by cultural amplification where gender norms and victim-blaming cultures compound the stigma, frequently resulting in seclusion, limited opportunities and psychological stress in the long term.

The paper points out that Pakistan has a convergence of risks like no other: highly institutionalized social systems built on honoring, unequal digital literacy, silence mediated by family, and insufficient institutional safeguards. The combination of these factors makes deepfakes more than a nuisance on the Internet, turning them into a weapon of gendered social control. Contrary to other global contexts in which reputational damage can be alleviated through institutional redress or through public response, the stigma remains and frequently only increases, generating the following effects on the victims; education, career and social contribution.

Simultaneously, the results indicate effective solutions. The risks can be reduced through legal reform, digital literacy, victim-centered assistance, and increased responsibility on the part of the media, civil society, and technology firms. More importantly, such interventions should be culturally sensitive and community-based, involving trusted community participants to combat stigma and change detrimental narratives.

In the end, this paper highlights that the issue of AI-generated fake content is not only a technological issue but also a highly social one. It is necessary to consider both technology, culture, and gendered power relations to fully address it. Devoid of specific, multi-level interventions, deepfakes will keep undermining the psychological health and social status of women in Pakistan,



as well as lowering their civic engagement, which reduces the progress of gender equality and the societal development in general.

11. References

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