

Perception and Exposure of Nigerian Adolescents to Deepfake Technology Use in Films

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Abstract

This study investigated the perception and exposure of Nigerian adolescents to deepfake technology in films, focusing on their level of awareness, the extent of their exposure, and the psychological and trust-related impacts of this technology. The research was conducted among adolescents at Nnamdi Azikiwe University High School, Awka, with a total sample of 260 respondents, categorized by age and sex. Using a survey methodology, the study examined how adolescents interact with deep-fake content and its potential effects on their trust in digital media, as well as their psychological response to such media manipulation. The study was anchored on the Uses and Gratification theory and Social Learning Theory. Findings indicated that while many adolescents possess a basic awareness of deepfake technology, their understanding of its applications and implications remain limited. A considerable number of respondents reported frequent exposure to deepfake content in films, particularly among older adolescents. The study also revealed that exposure to deepfakes significantly affects adolescents' trust in digital media, leading to increased skepticism and weariness. Furthermore, deep-fake exposure has psychological effects, with some adolescents reporting confusion, anxiety, and difficulty distinguishing between real and fake media. The study concluded that deep-fake technology is a growing concern in the digital media landscape, with significant implications for adolescents' trust in media and their psychological well-being and therefore recommended the implementation of media literacy programs in schools to enhance adolescents' critical thinking skills and media consumption habits. It also called for greater parental involvement in adolescents' media activities and suggested the need for regulatory frameworks to address the ethical concerns surrounding deep-fake technology.

Keywords: adolescents, deepfake, exposure, films, perception, technology

Introduction

The rapid advancement of technology has brought about numerous changes in various sectors, including media and entertainment (Hobbs, 2010). One of the most striking innovations in recent years is deepfake technology, which uses artificial intelligence (AI) to create realistic but fake video and audio content. Deepfakes have garnered significant attention for their potential to revolutionize film and media production, but they also pose considerable ethical, psychological, and social challenges. Deepfake technology emerged from artificial intelligence, specifically from advancements in machine learning and deep learning (Nwokefor & Okunoye, 2013). The term "deepfake" is a portmanteau of "deep

learning" and "fake," reflecting the technology's reliance on neural networks to manipulate and generate content. The earliest instances of deepfakes can be traced back to 2017, when a Reddit user used a generative adversarial network (GAN) to create realistic but fake videos of celebrities (Chesney & Citron, 2019). Technology quickly gained notoriety due to its potential misuse, such as creating non-consensual explicit content, spreading misinformation, and manipulating political events. Despite these concerns, deep fakes also have legitimate applications in entertainment, education, and art. In the film industry, for example, deep fakes can be used to create realistic special effects, de-age actors, and resurrect deceased performers, offering new creative possibilities (Whittaker et al., 2020). The study of adolescents' perception and exposure to deep fake technology in films is of paramount importance in the digital age. As deep fake technology continues to evolve and become more accessible, understanding its impact on young people is crucial for developing effective interventions and educational programs.

As technology continued to evolve, so did the film industry. The mid-20th century we witnessed the rise of color films, widescreen formats, and special effects, enhancing the visual experience for audiences. The advent of digital technology in the late 20th and early 21st centuries brought about another significant transformation, with digital cameras, computer-generated imagery (CGI), and sophisticated editing software revolutionizing the way films were made and consumed (Prince, 2012).

Today, the film industry is a global phenomenon, with digital platforms such as streaming services providing unprecedented access to vast content. However, the same technological advancements that have democratized film production and distribution have also given rise to new challenges, such as the proliferation of deepfake technology. Deepfakes leverage deep learning algorithms to create hyper-realistic fake videos and audio recordings, posing significant ethical and social concerns. These concerns are particularly relevant in the context of adolescents, who are avid consumers of digital media and are at a critical stage of cognitive and social development.

Deepfake technology, a portmanteau of "deep learning" and "fake," leverages AI techniques to manipulate or generate visual and auditory content that appears authentic (Bickert,

2020). Initially developed for benign purposes such as film production and entertainment, deep fakes have since found applications in more controversial areas, including misinformation, cyberbullying, and identity theft. The capability of deep fake technology to convincingly mimic real people has raised alarms about its potential misuse (Chesney & Citron, 2019).

Globally, deepfakes have been a topic of concern due to their implications for privacy, security, and trust in media. In the United States and Europe, governments and organizations are grappling with how to regulate and mitigate the risks associated with deepfakes (Schick, 2020). Studies have shown that exposure to deepfakes can significantly impact individuals' ability to trust digital content, leading to broader societal issues such as the erosion of trust in media and institutions (Vaccari & Chadwick, 2020).

In Nigeria, the proliferation of digital media and the increasing accessibility of the internet have made deepfake technology a pertinent issue. Nigerian adolescents, avid consumers of digital content through platforms like YouTube, Instagram, and TikTok, are particularly vulnerable to the influence of deepfakes (NCC, 2023). A study by the Paradigm Initiative (2021) highlights that Nigerian youth are increasingly exposed to digital misinformation, including deepfakes, which can significantly shape their perceptions and behaviors. Adolescents are at a critical stage of development where their cognitive and social skills are still maturing. Their exposure to deepfake technology can have profound implications. For instance, deepfakes can be used to create harmful content, such as fake pornography or misleading political videos, which can impact adolescents' psychological well-being and their ability to discern truth from falsehood (Bickert, 2020). Moreover, the manipulative nature of deepfakes can exacerbate issues related to cyberbullying and online harassment, with potentially devastating effects on young individuals' mental health. Furthermore, the educational system in Nigeria still needs to integrate media literacy programs that fully address the challenges posed by advanced technologies like deepfakes. This lack of preparedness leaves adolescents more susceptible to the negative influences of digital misinformation. According to Onomo (2022), there is an urgent need for educational interventions that equip young people with the skills to critically evaluate digital content and recognize the potential risks associated with deepfakes.

Despite the growing concern, there is limited research specifically focused on the Nigerian context regarding adolescents' interaction with deepfake technology. This gap in the literature underscores the need for targeted studies that explore how deepfakes are perceived and the extent to which Nigerian adolescents are exposed to them. Understanding these dynamics is crucial for developing effective educational and regulatory responses to mitigate the potential negative impacts of deepfakes on this demographic.

Statement of the Problem

Deepfake technology has emerged as a powerful tool in the digital landscape, offering innovative possibilities for creative expression while posing significant challenges to truth and trust in media. For adolescents in Nigeria, who are prolific consumers of digital content, the implications of deep fake technology are particularly concerning. Despite the increasing accessibility of digital media and the rising prevalence of deep fakes, there is a notable lack of research focused on how Nigerian adolescents perceive and are exposed to deep fake technology in films. This gap in the literature presents several critical issues.

Firstly, many Nigerian adolescents may lack awareness and understanding of deep fake technology, rendering them more susceptible to believing and disseminating manipulated content. According to Chesney and Citron (2019), deep fakes can create highly convincing but false representations of people, leading to misinformation and confusion. In a context where digital literacy is still developing, adolescents are particularly vulnerable to such sophisticated forms of deception.

Secondly, continuous exposure to deep fakes can erode trust in digital media, complicating adolescents' ability to distinguish between real and fake content. This erosion of trust extends beyond media to broader societal and institutional trust, undermining confidence in various information sources. Vaccari and Chadwick (2020) note that the pervasive presence of deepfakes can lead to a general skepticism towards all digital media, fostering an environment where truth becomes increasingly difficult to ascertain.

The psychological and emotional impacts of deepfake exposure on adolescents are also significant. Manipulative and harmful content, such as fake pornography or misleading political videos, can contribute to anxiety, mistrust, and cyberbullying, with potentially long-

lasting effects on mental health. Bickert (2020) highlights that deepfakes can be used maliciously to target individuals, creating distress and harm that is challenging to counteract, especially for young and impressionable audiences.

This study seeks to address these gaps by exploring the perception and exposure of Nigerian adolescents to deepfake technology use in films. By understanding their awareness levels, ability to discern deepfakes, and the emotional and psychological impacts of exposure, this research aims to provide valuable insights for educators, policymakers, and parents. Basically, the goal is to inform the development of practical media literacy programs and regulatory measures that can mitigate the negative impacts of deepfakes while fostering a more informed and resilient young audience.

Objectives of the Study

The primary objective of this study is to investigate the perception and exposure of Nigerian adolescents to deepfake technology use in films. Specifically, the study aims to:

1. To determine the level of awareness and understanding among Nigerian adolescents regarding deepfake technology and its applications in films.
2. To identify the extent adolescents are exposed to deep-fake technology use in films.
3. To investigate how exposure to deepfake technology affects adolescents' trust in digital media content.
4. To ascertain the psychological influence of deepfake exposure on Nigerian adolescents.

Literature Review

Deepfake Technology: A Concept

Deepfake technology, a blend of "deep learning" and "fake," utilizes advanced AI and machine learning techniques to create highly realistic manipulations of audio, video, or images. These manipulations can depict individuals saying or doing things they never did, making it difficult to distinguish between authentic and fake content (Chesney & Citron, 2019). Initially developed for entertainment and filmmaking, deepfakes have raised ethical

concerns due to their potential misuse in spreading misinformation, creating fake pornography, and influencing public opinion.

Deepfake technology has become a significant topic of discussion in recent years due to its ability to create highly realistic but entirely fabricated audio, video, and image content. The term "deepfake" is derived from the combination of "deep learning" and "fake," reflecting the use of advanced artificial intelligence (AI) techniques to produce these digital manipulations (Citron, 2019). This technology leverages neural networks, particularly generative adversarial networks (GANs), to generate synthetic media that can convincingly depict people doing or saying things they never actually did or said.

The origins of deep-fake technology can be traced back to developments in AI and machine learning. GANs, introduced by Ian Goodfellow and his colleagues in 2014, play a crucial role in deep-fake creation. GANs consist of two neural networks: a generator and a discriminator (Hobbs, 2020). The generator creates fake data, while the discriminator evaluates its authenticity. Through an iterative process, the generator improves its output to the point where the discriminator can no longer distinguish between real and fake data. This adversarial training process results in highly realistic synthetic content.

Deepfake technology initially gained attention for its potential in entertainment and filmmaking. It offers filmmakers the ability to create seamless visual effects, revive deceased actors for posthumous performances, and produce realistic de-aging effects (Paris & Donovan, 2019). However, the same capabilities that make deepfakes appealing for legitimate purposes also make them ripe for misuse. As technology became more accessible, concerns grew about its potential for harm, particularly in the realms of misinformation, political manipulation, and personal privacy violations.

One of the primary concerns regarding deep-fake technology is its capacity to spread misinformation and erode trust in digital media. Deepfakes can be used to create convincing but entirely false representations of public figures, leading to the dissemination of fake news and propaganda (Gerbner, 2016). For instance, a deepfake video could show a politician making inflammatory statements they never actually made, potentially influencing public opinion and even election outcomes. The ability to fabricate such content challenges

traditional notions of evidence and authenticity, making it increasingly difficult for individuals to trust what they see and hear online.

The political implications of deepfakes are particularly troubling. In the realm of geopolitics, deepfakes have the potential to create diplomatic crises by depicting world leaders in compromising situations (UN, 2018). Such fabricated content can undermine trust between nations, fuel conflict, and destabilize international relations. The rapid spread of deepfake technology has prompted governments and security agencies to consider new strategies for identifying and countering the potential threats posed by these realistic digital manipulations.

Beyond political manipulation, deep-fake technology has significant implications for personal privacy and security. One of the most notorious uses of deepfakes has been in the creation of non-consensual explicit content (Visual Hub, 2023). Victims, often women, have found their images superimposed onto pornographic videos without their consent, causing significant emotional distress and reputational damage. The ease with which deepfakes can be created and distributed online exacerbates the harm, as such content can quickly go viral and be challenging to remove once it has spread. In addition to non-consensual explicit content, deepfakes pose a threat to individuals' reputations and personal lives. For example, deepfake audio or video could be used to fabricate evidence in legal disputes, frame individuals for crimes they did not commit, or create false narratives about a person's actions or character. The potential for such misuse underscores the urgent need for robust legal and technological measures to protect individuals from the harmful effects of deepfake technology.

Adolescents: An Overview

According to the United Nations Children's Fund (UNICEF), adolescence is defined as the period between 10 and 19 years of age. This phase is divided into early adolescence (10-14 years) and late adolescence (15-19 years), each characterized by different developmental tasks and needs (UNICEF, 2021). The World Health Organization (WHO) similarly defines adolescents as individuals between the ages of 10 and 19, emphasizing that this group experiences rapid physical growth and psychosocial development (WHO, 2020). In the

Nigerian context, the Child's Rights Act defines a child as anyone under the age of 18, which includes the entire adolescent age range (Child's Rights Act, 2003). These definitions underscore the importance of viewing adolescence as a distinct and critical period in human development.

The nature of adolescence is multifaceted, involving a complex interplay of biological, psychological, and social factors. Biologically, this period is marked by the onset of puberty, which brings about significant changes in the body, including hormonal fluctuations and the development of secondary sexual characteristics. These changes are accompanied by a heightened sensitivity to peer influences and a growing interest in identity exploration (Steinberg, 2014). Psychologically, adolescents are in a phase of cognitive development characterized by an increased capacity for abstract thinking, problem-solving, and moral reasoning (Piaget, 2022). Socially, they begin to establish more independent relationships outside the family unit, often seeking to establish a sense of identity and belonging within peer groups.

Adolescents are particularly important to this study for several reasons. First, this age group is highly susceptible to the influences of media and technology. With the proliferation of smartphones and internet access, adolescents are spending significant amounts of time online, consuming various forms of digital content. This includes social media, streaming services, and user-generated content platforms, all of which can profoundly impact their development and worldview (Rideout, 2015). The growing accessibility and consumption of digital media among adolescents in Nigeria make this demographic particularly relevant for studying the effects of emerging technologies such as deepfakes.

The focus on adolescents is also crucial due to their unique position at the cusp of adulthood. This transitional phase involves the development of critical life skills, including media literacy and digital citizenship. Adolescents are in the process of forming their own beliefs, values, and opinions, making them vulnerable to misinformation and manipulative content. Understanding how they perceive and interact with deepfake technology can provide insights into their media literacy levels and inform the development of educational interventions aimed at fostering critical thinking and discernment.

Furthermore, adolescents' engagement with media is often different from that of older or younger age groups (Statista, 2018). They are more likely to adopt new technologies and platforms quickly, making them a key demographic for understanding emerging media trends. This makes them an ideal focus group for examining the potential long-term effects of exposure to deepfake technology, both in terms of psychological impact and the shaping of social and cultural norms.

This period is marked by increased media consumption and a growing engagement with social media platforms, making adolescents a prime target for digital content, including deepfakes (Rideout & Robb, 2018). Their developing cognitive abilities and critical thinking skills are still maturing, which affects their capacity to discern credible information from manipulated content (Livingstone & Helsper, 2018). The advent of digital technology and the proliferation of media platforms have significantly transformed how adolescents consume media, influencing their behavior, attitudes, and overall development.

Media consumption among adolescents has evolved dramatically with the rise of the internet, social media, and mobile technologies. Unlike previous generations who primarily engaged with traditional media such as television, radio, and print, today's adolescents are immersed in a digital media environment. This shift has been driven by the widespread availability of smartphones and other portable devices, which provide constant access to a vast array of digital content. According to a report by Common Sense Media (2019), American teenagers spend an average of over seven hours per day on screens, excluding time spent on schoolwork. This trend is reflective of global patterns, with similar statistics reported in other regions, including Nigeria (Adomi, 2020).

The types of media consumed by adolescents are diverse and encompass various forms of content, including social media, video streaming services, online gaming, and digital news. Social media platforms such as Instagram, Snapchat, TikTok, and Facebook are particularly popular among adolescents, serving as primary spaces for social interaction and self-expression (Anderson & Jiang, 2018). These platforms allow adolescents to connect with peers, share personal experiences, and access information on a wide range of topics. The interactive nature of social media also enables adolescents to participate in online

communities, fostering a sense of belonging and identity formation (Subrahmanyam & Šmahel, 2021).

Video streaming services like YouTube, Netflix, and Hulu have also become integral to adolescents' media consumption habits. YouTube, in particular, is a favored platform due to its vast library of user-generated content, tutorials, music videos, and entertainment shows. Adolescents turn to YouTube not only for entertainment but also for educational purposes, seeking out videos that help with homework, providing tutorials on new skills, or explain complex concepts (Wartella et al., 2016). The on-demand nature of these platforms allows adolescents to consume content at their convenience, further integrating media consumption into their daily routines.

Media Literacy

Media literacy, the ability to access, analyze, evaluate, and create media in various forms, is an essential skill in today's digital age. As media consumption becomes increasingly integral to daily life, particularly among adolescents, media literacy education has emerged as a crucial component of educational curricula worldwide. This skill set enables individuals to navigate the complexities of the media landscape, discern credible information from misinformation, and engage in critical thinking about media messages (Potter, 2018).

The concept of media literacy has evolved significantly over time. Initially, media literacy focused on traditional media such as television, radio, and print, emphasizing the need to understand the content, structure, and intent of media messages. With the advent of digital technology and the internet, the scope of media literacy has expanded to include digital literacy, information literacy, and visual literacy, reflecting the diverse ways in which media is consumed and produced today (Hobbs, 2010).

Digital literacy, a subset of media literacy, involves the skills required to effectively use digital devices, software, and the internet. This includes understanding how to search for information, evaluate the credibility of online sources, and protect personal information online. In an era where fake news and online misinformation are rampant, digital literacy is particularly important for adolescents, who are among the most active users of digital media (Livingstone, 2014).

Information literacy, another critical aspect, focuses on the ability to identify, locate, evaluate, and use information effectively. In the context of media literacy, information literacy equips individuals with the skills needed to sift through vast amounts of information available online, distinguishing between reliable and unreliable sources. This skill is essential for academic success, as well as for informed citizenship and lifelong learning (Association of College and Research Libraries, 2016).

Visual literacy, which pertains to the ability to interpret and make meaning from visual images, has become increasingly important with the rise of visual-centric media platforms like Instagram, Snapchat, and TikTok (Felten, 2018). Adolescents are particularly drawn to these platforms, where visual content is a primary means of communication. Visual literacy enables them to understand the messages conveyed through images and videos, recognize visual manipulation, and create their own visual content in a meaningful way (Felten, 2018).

The importance of media literacy education cannot be overstated. As adolescents are prolific consumers and producers of media, they need the skills to critically engage with media content. Media literacy education helps them understand the constructed nature of media messages, recognize the influence of media on their perceptions and behaviors, and make informed decisions about their media consumption (Buckingham, 2023).

In the Nigerian context, media literacy education is gaining recognition as a necessary component of the educational system. Nigeria, like many other countries, is experiencing rapid digital transformation, with increasing access to the internet and digital devices among its population. However, this digital growth also brings challenges, such as the spread of misinformation, cyberbullying, and digital divides. Media literacy education can help address these challenges by equipping adolescents with the skills needed to navigate the digital landscape responsibly and ethically (Ezegwu, 2016).

The integration of media literacy into the Nigerian educational curriculum is still in its nascent stages. Efforts are being made to incorporate media literacy into existing subjects, such as English language and social studies, as well as to develop standalone media literacy programs. These initiatives aim to provide students with the skills to critically engage with

media content, understand the ethical implications of media production and consumption, and use media to advocate for positive social change (Ogunyemi, 2014).

One of the key challenges in promoting media literacy in Nigeria is the lack of resources and trained educators. Many schools in Nigeria, particularly in rural areas, lack access to digital devices and the internet, making it difficult to implement media literacy programs. Additionally, there is a need for professional development programs to train educators in media literacy concepts and teaching strategies. Addressing these challenges requires investment in infrastructure, teacher training, and the development of culturally relevant media literacy curricula (Omekwu, 2016).

Despite these challenges, there are promising developments in the field of media literacy in Nigeria. Organizations such as the Media Awareness and Information for All Network (MAIN) and Paradigm Initiative are actively working to promote media literacy through workshops, campaigns, and advocacy efforts. These organizations collaborate with schools, communities, and policymakers to raise awareness about the importance of media literacy and to provide resources and training for educators and students (Olatunji, 2015).

The role of parents and guardians in fostering media literacy is also crucial. As primary caregivers and role models, parents can influence their children's media consumption habits and attitudes towards media. Encouraging open discussions about media content, setting boundaries for screen time, and co-viewing media with children are effective strategies for promoting media literacy at home. Parents can also take advantage of resources and training programs offered by schools and organizations to enhance their own media literacy skills and better support their children (Rideout, 2016).

Digital Media in Nigeria and Impact on Adolescents

Digital media has profoundly transformed the landscape of communication, entertainment, and information dissemination in Nigeria, particularly impacting the adolescent demographic. The widespread adoption of mobile phones, the internet, and social media platforms has ushered in new ways of interacting, learning, and sharing experiences. For Nigerian adolescents, digital media offers both opportunities and challenges, shaping their development in multifaceted ways.

The penetration of mobile phones and internet access in Nigeria has seen a significant rise over the past decade. According to the Nigerian Communications Commission (NCC), mobile internet subscribers in Nigeria reached over 100 million in 2020, highlighting the extensive reach of digital connectivity (NCC, 2020). This connectivity has facilitated the proliferation of social media platforms such as WhatsApp, Facebook, Instagram, and Twitter, which are immensely popular among Nigerian adolescents. These platforms serve as vital tools for communication, self-expression, and access to information, aligning with global trends in digital media usage (Statista, 2021).

One of the primary impacts of digital media on Nigerian adolescents is the democratization of information. The internet provides access to a vast array of information resources that were previously unavailable or difficult to obtain. Educational websites, online courses, and digital libraries offer adolescents the opportunity to enhance their learning beyond the traditional classroom setting. Platforms like YouTube host numerous educational channels that cover a wide range of subjects, enabling students to supplement their schoolwork with additional resources (Madueke, 2017). This access to information empowers adolescents to take charge of their learning, fostering a culture of self-directed education.

Digital media also plays a crucial role in socialization among Nigerian adolescents. Social media platforms enable them to connect with peers, share experiences, and build social networks. These interactions can help adolescents develop social skills, build self-esteem, and establish their identities. For many Nigerian youths, social media is a space where they can express themselves freely, explore their interests, and engage in conversations about topics that matter to them. This digital socialization is particularly important in a society where traditional norms and values may limit face-to-face interactions, especially for girls and young women (Ufuophu-Biri & Iwu, 2014).

However, the influence of digital media on Nigerian adolescents is not without its challenges. One of the significant concerns is the exposure to inappropriate content, including violence, pornography, and harmful behaviors. The lack of robust content regulation on the internet means that adolescents can easily access material that is not suitable for their age. This exposure can have detrimental effects on their psychological and emotional well-being,

leading to issues such as desensitization to violence, distorted perceptions of relationships, and early sexualization (Okafor, 2019). Parents and educators often struggle to monitor and control what adolescents view online, exacerbating the issue.

Cyberbullying is another critical issue associated with digital media use among Nigerian adolescents. The anonymity and reach of social media platforms can embolden individuals to engage in bullying behaviors, which can have severe consequences for the victims. Cyberbullying can lead to anxiety, depression, and in extreme cases, suicidal thoughts among adolescents. Studies have shown that Nigerian adolescents who experience cyberbullying are more likely to suffer from low self-esteem and mental health problems (Nwankwo & Okoye, 2015). Addressing cyberbullying requires comprehensive strategies, including awareness campaigns, digital literacy education, and support systems for victims.

The addictive nature of digital media is also a growing concern. Many adolescents spend excessive amounts of time on social media, gaming, and other online activities, often at the expense of their academic performance and physical health. The compulsive use of digital media can lead to sleep deprivation, reduced physical activity, and poor academic outcomes. In Nigeria, where academic success is highly valued, the distraction caused by digital media can have significant implications for students' educational attainment (Bada, 2020).

Cross-Cultural Comparison

A cross-cultural comparison of adolescents' perception and exposure to deep-fake technology in films reveals both universal themes and unique cultural nuances. Understanding these differences is critical for developing effective strategies to address the challenges posed by deep-fake technology globally. Adolescents' interaction with media, including deep-fake content, is influenced by cultural, social, economic, and technological factors that vary significantly across different regions.

To begin with, the level of technological advancement and access to digital resources plays a pivotal role in shaping adolescents' exposure to deep-fake technology. In highly developed countries with widespread internet access and advanced technological infrastructure, adolescents are more likely to encounter deep-fake technology in various forms of media, including films, social media, and news. For instance, in the United States and Europe, the

prevalence of smartphones and high-speed internet facilitates greater exposure to digital content, including deepfakes (Livingstone & Haddon, 2009). This widespread access also enables adolescents to participate actively in creating and sharing digital content, which can include the use of deep-fake technology.

In contrast, in developing countries where access to digital technology and the internet is more limited, adolescents may have less exposure to deep-fake technology. However, this does not mean that they are entirely insulated from its effects. For example, in Nigeria, while there are disparities in digital access, urban areas with better technological infrastructure see a higher prevalence of digital media consumption among adolescents (Adegbola, Gearhart, & Zhang, 2018). These adolescents might encounter deepfake content through social media platforms or pirated films, which are common in many developing countries. The limited access can also mean that the spread of deepfake technology may be slower, but it can still have significant impacts when encountered.

Cultural values and norms significantly influence how adolescents perceive and interact with deep-fake technology. In Western cultures, where individualism and freedom of expression are highly valued, adolescents might see deep-fake technology as a tool for creativity and self-expression. They might use deepfake apps to create humorous or entertaining content, often without fully understanding the potential ethical implications or the technology's potential for misuse (Brennen, Simon, Howard, & Nielsen, 2020). This perspective can lead to a more casual attitude towards deepfakes, potentially downplaying the serious issues of misinformation and privacy invasion.

Conversely, in cultures with a strong emphasis on community and collective well-being, such as many Asian and African societies, the reception of deepfake technology might be more cautious. For example, in Japan and South Korea, where there is significant concern about social harmony and the impact of technology on societal values, there might be more apprehension about the use of deepfakes. Adolescents in these cultures might be more aware of the potential harms of deepfakes, such as cyberbullying or damage to reputations, and thus may approach the technology with greater skepticism (Matsuda, 2018; Kim, 2020).

The role of media literacy education also varies widely across cultures and significantly impacts adolescents' ability to critically engage with deep-fake technology. In countries with well-established media literacy programs, adolescents are better equipped to understand and navigate the complexities of digital media, including the ethical and legal aspects of deepfakes. For instance, Finland and Canada have comprehensive media literacy curricula that teach students to critically analyze media messages, understand the technology behind deepfakes, and recognize their potential for harm (Kupiainen, Sintonen, & Suoranta, 2017; MediaSmarts, 2018). This education empowers adolescents to make informed decisions about their media consumption and production.

In contrast, in countries where media literacy education is less developed or unevenly implemented, adolescents may lack the necessary skills to critically assess deepfake content. This can make them more vulnerable to the negative impacts of deepfakes, such as misinformation and manipulation. For example, in many African countries, media literacy is not yet a formal part of the education system, leading to a gap in adolescents' ability to critically engage with digital media (Gagliardone, 2019). Addressing this gap is crucial for helping adolescents navigate the challenges posed by deepfake technology and other digital media trends.

Perception and Exposure: An Overview

Perception and exposure are two critical concepts when examining the interaction between adolescents and digital media, particularly within the Nigerian context. These concepts help to understand how adolescents interpret and engage with media content and the extent to which they are influenced by their media consumption. Understanding perception and exposure in this context requires a deep dive into the cognitive, emotional, and social dimensions of media interaction among Nigerian adolescents.

Perception in the context of digital media refers to the way adolescents interpret and make sense of the content they consume. This process is influenced by a variety of factors, including individual differences, cultural context, prior knowledge, and cognitive biases (Gagliardone, 2019). For Nigerian adolescents, perception is shaped by the unique cultural, social, and economic environment in which they live. This environment includes traditional

values, educational background, peer influences, and the specific ways in which digital media is accessed and used in Nigeria (Obono, 2021).

One significant factor influencing perception is the cultural context. Nigerian society is characterized by a rich cultural heritage and diverse ethnic groups, each with its own values, traditions, and norms. These cultural elements play a crucial role in shaping how adolescents perceive digital media content. For instance, content that aligns with traditional values and norms may be perceived positively, while content that contradicts these values may be viewed with skepticism or disapproval. This cultural lens influences how adolescents interpret media messages, including their understanding of gender roles, relationships, and societal expectations (Okeke, 2018).

Prior knowledge and cognitive development also play a significant role in shaping perception. Adolescents are at a developmental stage where they are forming their identities and worldviews. Their prior knowledge, including what they have learned from family, school, and community, serves as a filter through which they interpret new media content. Cognitive development, including the ability to think critically and reflect on media messages, further influences how adolescents perceive and evaluate what they see and hear online. As adolescents mature, their ability to discern the credibility of information and recognize bias in media content typically improves (Steinberg, 2014).

Exposure, on the other hand, refers to the extent and frequency with which adolescents engage with digital media (Okeke, 2018). In Nigeria, exposure to digital media is influenced by several factors, including access to technology, socioeconomic status, and media consumption habits (Obono, 2021). The proliferation of mobile phones and affordable data plans has increased access to digital media among Nigerian adolescents, although disparities remain, particularly in rural areas where internet connectivity may be limited (NCC, 2020). The nature of exposure can vary widely, from passive consumption of content to active engagement with media. Passive consumption includes activities such as watching videos, scrolling through social media feeds, and reading online articles without much interaction. Active engagement, on the other hand, involves creating and sharing content, commenting on posts, participating in online discussions, and using digital media for

collaborative projects. Active engagement tends to have a more significant impact on adolescents' perceptions and behaviors, as it involves higher levels of cognitive and emotional involvement (Valkenburg et al., 2016).

The frequency and duration of exposure are also important considerations. Adolescents who spend a considerable amount of time on digital media platforms are more likely to be influenced by the content they consume. Excessive exposure can lead to issues such as information overload, where the sheer volume of information becomes overwhelming, making it difficult to process and retain meaningful insights. Additionally, excessive screen time can negatively impact physical health, including sleep patterns, physical activity, and eye health, as well as mental health, leading to issues such as anxiety, depression, and social isolation (Twenge, 2019).

The content to which adolescents are exposed is another critical factor. In the Nigerian context, digital media content ranges from educational materials and news to entertainment and user-generated content. The nature of this content can significantly influence adolescents' perceptions and behaviors. For instance, exposure to educational content can enhance learning and cognitive development, while exposure to violent or inappropriate content can have negative effects on behavior and emotional well-being. The algorithms used by social media platforms to personalize content also play a role in shaping exposure, often prioritizing content that generates high engagement, which may not always be beneficial (Pariser, 2011).

Parental Mediation in Adolescents Media Consumption

The roles of parents and educators in shaping the media consumption habits of adolescents are crucial, given the profound impact that digital media has on this age group. As gatekeepers, mentors, and role models, parents and educators play a pivotal role in guiding adolescents through the complexities of the digital landscape, helping them to navigate both its opportunities and pitfalls. This guidance is essential for fostering healthy media habits and ensuring that adolescents can leverage digital media for positive outcomes while mitigating potential negative effects.

Parental involvement in media consumption is critical for several reasons. First, parents can help set boundaries and establish rules around media use, which is essential for preventing excessive screen time and promoting balanced lifestyles. Research by Lauricella, Wartella, and Rideout (2015) shows that parental mediation strategies, such as setting time limits on screen use and monitoring the types of media consumed, are effective in reducing the negative impacts of media on children and adolescents. These strategies help to ensure that media consumption does not interfere with important activities like sleep, physical exercise, and face-to-face social interactions. Moreover, parents play a vital role in mediating the content that adolescents are exposed to.

Padilla-Walker, Coyne, & Fraser (2022) assert that active parental mediation, which involves discussing media content with children, can help them to critically evaluate what they see and hear. This type of mediation encourages adolescents to think about the messages they encounter, question the validity of information, and understand the intentions behind various media productions. Studies have shown that active mediation can reduce the influence of harmful media content, such as violence and stereotypes, on adolescents' attitudes and behaviors (Nathanson, 2019).

In addition to setting boundaries and mediating content, parents also serve as role models for media consumption. Adolescents often emulate the behaviors they observe in their parents, including how they use media. Parents who demonstrate healthy media habits, such as limiting screen time, prioritizing offline activities, and engaging with media content critically, can positively influence their children's media behaviors. Conversely, parents who exhibit poor media habits may inadvertently encourage similar behaviors in their adolescents (Padilla-Walker, Coyne, & Fraser, 2022).

Educators also play a fundamental role in guiding adolescents' media consumption through the integration of media literacy education into the curriculum. Media literacy education equips students with the skills needed to critically analyze media messages, understand the construction and purpose of media content, and recognize the impact of media on individuals and society. Hobbs (2020) emphasizes that media literacy is essential for preparing students to navigate the complex media environment and to participate fully in a

democratic society. By fostering critical thinking skills, educators can help adolescents become more discerning consumers of media and less susceptible to manipulation and misinformation.

Incorporating media literacy into the education system involves several key components. First, educators need to provide students with a theoretical understanding of media, including the ways in which media are produced, distributed, and consumed. This foundational knowledge helps students to contextualize the media messages they encounter and to appreciate the economic, political, and cultural factors that shape media content. Secondly, educators should emphasize the development of practical skills, such as the ability to deconstruct media messages, evaluate sources for credibility, and create media content responsibly. These skills are essential for helping adolescents to engage with media in a critical and informed manner (Koltay, 2022).

Empirical Reviews of Related studies

Afolayan & Akintunde (2023) conducted a study in 2023 to explore the impact of deepfake videos on Nigerian adolescents' perception of reality and the credibility of media content. Utilizing a mixed-methods approach, they gathered data through surveys and focus group discussions involving adolescents from various secondary schools in Lagos. Their findings revealed that a significant majority of adolescents had encountered deepfake content and expressed uncertainty about the authenticity of online information. This study is similar to the present research in its focus on adolescents' media interactions, although it is geographically confined to Lagos. The researchers recommended integrating deepfake detection education into the digital literacy curriculum to better equip students in discerning authentic content.

Oladimeji (2022) investigated the role of media literacy in mitigating the effects of deepfakes among Nigerian youth. Oladimeji employed a quasi-experimental design, conducting pre- and post-tests with control and experimental groups of high school students in Abuja. The study found that students who received media literacy training were significantly more adept at identifying deepfakes than those in the control group, demonstrating the effectiveness of such educational interventions. While both Oladimeji's

and the current study emphasize the importance of media literacy, Oladimeji's work focuses specifically on the efficacy of educational interventions, whereas the current research includes broader aspects of perception and psychological impacts. The study recommended incorporating media literacy modules into the national education curriculum to better prepare students for the challenges of digital media.

Chukwu & Nwafor (2021) in their study assessed the awareness and effects of deep-fake technology among secondary school students in Enugu. Using a descriptive survey method, they collected data from 500 students across ten schools. The study found that while awareness of deepfakes was relatively high, many students struggled to differentiate between fake and authentic content. This research shares similarities with the present study in its focus on adolescents' awareness of deepfakes, but it employs a purely descriptive approach. The authors recommended that digital literacy programs be regularly updated to include information on emerging technologies like deepfakes.

Adebayo (2020) in a qualitative study conducted in 2020, Adebayo explored the psychological impact of exposure to deepfake videos among adolescents in South-West Nigeria. Through in-depth interviews with 30 adolescents, the research found that exposure to deepfakes led to confusion, anxiety, and a general distrust in online media. Like the present study, Adebayo's research focuses on the psychological impacts of deepfakes, although it leans more toward qualitative insights into emotional outcomes. The study recommended the development of support systems in schools to help adolescents cope with media-induced anxiety.

Theoretical Framework

Uses and Gratifications Theory

The Uses and Gratifications Theory (UGT) is a well-established framework in the field of communication and media studies. It emerged in the early 1940s and 1950s as a response to earlier media effect theories that predominantly viewed audiences as passive recipients of media content. UGT shifts the focus from the effects of media on audiences to the ways in which individuals actively use media to fulfill specific needs and desires. The theory suggests that audiences are not mere consumers but active participants who make

deliberate choices about the media they consume based on their psychological and social needs.

The foundational work on UGT can be attributed to scholars such as Elihu Katz, Jay Blumler, and Michael Gurevitch. In their seminal work in the 1970s, Katz, Blumler, and Gurevitch systematically articulated the core assumptions of the theory. They proposed that media users play an active role in selecting and utilizing media, driven by a variety of needs such as information, personal identity, social integration, and entertainment (Katz, Blumler, & Gurevitch, 2018). These needs motivate individuals to seek out specific media channels, genres, or content that they believe will satisfy these needs.

The Uses and Gratifications Theory is particularly relevant to this study, which focuses on adolescents' interactions with deep-fake technology in films. Adolescents, as active media users, are constantly engaging with various forms of digital media to fulfill their developmental needs. These needs can range from seeking information about the world, shaping their identity, connecting with peers, or simply for entertainment. UGT provides a useful lens for understanding the motivations behind adolescents' media consumption patterns and how these motivations influence their susceptibility to deepfake content.

Social Learning Theory

Social Learning Theory (SLT), developed by Albert Bandura (1977), emphasizes that learning occurs through observation, imitation, and modeling. According to SLT, individuals, particularly adolescents, learn behaviors, attitudes, and emotional reactions by observing others, including those portrayed in the media. This theory is pertinent when examining the influence of deep-fake technology on adolescents, as it provides a framework for understanding how exposure to manipulated content can shape their perceptions and behaviors.

Adolescents are in a critical developmental stage where they are highly impressionable and susceptible to external influences. When they are exposed to deepfakes in films, they may learn to mimic the behaviors and attitudes depicted, believing them to be authentic representations of reality. For instance, if a deepfake portrays a celebrity endorsing a particular behavior or viewpoint, adolescents might internalize and emulate these

behaviors, regardless of their authenticity. This can lead to the dissemination of misinformation and the reinforcement of harmful stereotypes or ideologies. SLT underscores the importance of critical media literacy, enabling adolescents to distinguish between real and manipulated content and to understand the ethical implications of deepfakes.

Method

This study is designed as a sample survey. The area of study is Nnamdi Azikiwe University High School, Awka, in Anambra state. It is a university secondary school that comprises classes between Junior secondary school 1-3 and then senior secondary school 1-3. The students who are in their early teen stages form the basis of this research because they are adolescents themselves.

The target population for this study comprises the total student body of Nnamdi Azikiwe University High School, Awka, which totals 835 students. The school features a variety of classes, each containing no more than 40 students. This diverse student body comprehensively represents adolescents' experiences and perceptions regarding deepfake technology and media consumption.

Sample Size and Sampling Procedure

Given the total population of 835 students, it is essential to determine a sample size that is both manageable and statistically significant to ensure the findings are generalizable to the entire population. The sample size for the study was made using the Taro Yamanes formula for sample size determination thus:

$$n = \frac{N}{(1 + N [e]^2)}$$

Where n = Sample size

N = Population - 835

e = Error margin - 0.05

835

$(1 + 835 [0.05]^2)$

835

$1 + 835 (0.0025)$

$1 + (835 \times 0.0025)$

$1 + 2.088$

$= 3.088$

835

3.088

$= 270$

The sample size is, therefore, 270.

A stratified random sampling method was employed to achieve this sample size. Stratified sampling involves dividing the population into homogeneous subgroups (strata) before randomly selecting samples from each subgroup. This method ensures that various characteristics within the population, such as age, gender, and class level, are proportionately represented.

The sampling procedure followed these steps:

1. List All Classes: The first step was to list all 21 classes in Nnamdi Azikiwe University High School, Awka. This includes junior and senior secondary classes, each with a maximum of 40 students.

2. Calculate the Proportion: Determine the proportion of students from each class about the total population. For example, if each class has approximately 40 students:

Proportion of each class = $40 / 270 = 0.148$

835

3. Determine Sample Size for Each Class: Multiplied the total sample size by the proportion for each class:

Sample size per class = $270 \times 0.048 \approx 13$ students per class

4. Random Selection within Strata: A random number generator method was used to select 13 students from each class. This ensured that every student had an equal chance of being selected, maintaining randomness and reducing bias.

Data Collection Instrument

A questionnaire was administered to collect the required data for the study. The questionnaire has three sections: Section I seeks the respondent's data, Section II questions the respondent's awareness and exposure to deep fake technology in Nigerian films, and Section III questions how exposure to deep fake technology affects respondents' trust in digital media content and the psychological influence of deep fake exposure on them.

Measurable Variables

The following variables were measured in the study:

Respondents' awareness and exposure to deepfake technology in Nigerian films: This will be measured by asking the respondents whether and how frequently they have encountered deepfake technology in films and their understanding of its application.

How has this exposure affected their trust in digital media? This will be measured by asking the respondents questions related to the extent to which they rely on and trust digital media content and their perceived authenticity of the media.

Psychological influence of deep fake exposure on the respondents: This will be measured by asking the respondents questions related to their emotional response, behavioral changes, and perception of reality regarding deep fake technology in Nigerian films.

Method of Data Analysis

The researcher's method of data analysis was quantitative. Answers extracted via the questionnaire were recorded as numeral data. The frequency of each answer was found, and the percentage computed accordingly. Statistical tables were used to present these data before the researcher proceeded to interpret them to answer the research questions. The analysis was computer-assisted via the Statistical Package for the Social Sciences (SPSS).

Table 2

Response Rate

	Frequency	Percentage
Number recovered	260	96.3%
Number unrecovered	10	3.7%
TOTAL	270	100%

Table 1 shows that out of the 270 questionnaires distributed, 260, representing 96.3%, were recovered, as against 10, representing 3.7%, which the researcher did not recover.

Demographic Data

Two demographic data (Age bracket and sex) are presented about the respondents below.

Table 3: Age Brackets of Respondents

Age	Frequency	Percentage
10-14	78	30%
15-19	130	50%
20 and above	52	20%
Total	260	100%

Table 3 shows that 30% of the respondents were between 10 and 14 years, 50% were between 15 and 19, while 20% were 20 years and above. Thus, the largest proportion of respondents (50%) falls within the 15-19 age bracket, suggesting that this age group is the most engaged or exposed to deepfake technology in films. This could indicate that older adolescents are more active in consuming media content, likely due to their advanced cognitive abilities, access to technology, or interest in digital trends.

Table 4: Sex of respondents

Sex	Frequency	Percentage
Male	140	53.85%
Female	120	46.15%
Total	260	100%

The study has slightly more male respondents, 53.85% of the sample, and female 46.15%. This could indicate that male adolescents may have more access to or interest in media technologies like deep fake content, which might be due to different social behaviors, technological exposure, or media preferences.

Respondents' level of awareness and understanding regarding deepfake technology and its applications in films.

To measure the respondents' level of awareness and understanding regarding deepfake technology and its applications in films, questions were posed inquiring whether respondents are familiar with the term "deepfake" and its use in films, if they can identify whether a film scene is real or altered using deepfake technology and where they learnt about deepfake technology. The answers they gave have been statistically presented in the Tables 5- 6 below.

Table 5

Respondents' been Familiar with the term Deepfake and it's use in Films

	Frequency	Percentage
Not familiar at all	76	29%
Slightly familiar	124	48%
Moderately familiar	50	19%
Very familiar	10	4%
TOTAL	260	100%

Table 5 shows that 29% of the respondents' are not familiar at all with the term Deepfake and it's use in films, 48% which represents the majority are slightly familiar, 19% are moderately familiar. In comparison, the other 4% are very familiar. Thus, majority of the students of Nnamdi Azikwe University High School are slightly familiar with deepfake and it's use in films, this suggests that to some extent adolescents are conversant with deepfake and it's application in films

Table 6
Respondents' Identifying Whether a Film Scene is Real or Altered using Deepfake Technology

Response	Frequency	Percentage
Never	24	9.2%
Rarely	51	19.6%
Sometimes	85	32.7%
Often	72	27.7%
Always	28	10.8%

TOTAL	260	100%
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Table 6 indicates that 9.2% of the respondents have never identified whether a film is real or Altered using deep fake Technology, 19.6% rarely do, 32.7% sometimes identify in a film scene, 27.7% often do, and 10.8% always do. These data suggest that most students sometimes identify when a film scene is real or altered using deep fake technology.

Table 7

Respondents' first knowledge about Deepfake Technology

Response	Frequency	Percentage
Social Media	68	26.2%
School/teachers	40	15.4%
Friends/peers	81	31.1%
Television/films	71	27.3%
TOTAL	260	100%

Table 7 shows that 26.2% of the respondents learnt about deep fake technology on social media, 15.4% through their teachers in school, 31.1% through their friends and peers, and 27.3% through the films they watch on television. This indicates that the majority of the students learnt about deep fake technology in films through their friends and peers, with social media coming behind. It reinforces the fact about the strong influence of peer pressure.

Respondents' Extent of Exposure to Deepfake Technology in Films

To measure the respondents' extent of exposure to deep fake technology in films, questions were posed asking the respondents how often they encounter content in films or videos that they suspect might be a deep fake, how many films they watched that included deep fake

technology, and if they actively seek out films or videos that use deep fake technology. The answers they gave have been statistically presented in Tables 8 – 9 below.

Table 8

How Often Respondents' Encounter Content in Films or Videos that they Suspect might be a Deepfake

Response	Frequency	Percentage
Never	16	6.2%
Rarely	21	8.1%
Sometimes	75	28.8%
Often	96	36.9%
Always	52	20%
TOTAL	260	100%

Table 8 shows that 6.2% of the respondents have never encountered content in films that they suspect might be deepfake, 8.1% rarely have, 28.8% sometimes, 36.9% often, while 20% always. These data still emphasized exposure of these kids to deepfake technology in films.

Table 9

Number of Films Respondents' Have Watched that Included Deepfake Technology

Response	Frequency	Percentage
None	9	3.4%
1-2 films	32	12.3%
3-5 films	58	22.3%

6-10 films	67	25.8%
More than 10	94	36.2%
TOTAL	260	100%

Table 9 indicates that 3.4% of the respondents have never seen a film that included deepfake technology, 12.3% have watched 1-2 films that included deepfake technology, 22.3% have watched 3-5, 25.8% have watched 6-10 while 36.2% which is the majority have watched more than 10 films that included deepfake technology. This is a no brainer, adolescents spend more time on movies whether mobile or TV though that behavior is declining due to exposure to more emerging social media platforms.

Table 10

Respondents' Actively Seeking out Films/Videos that uses Deepfake Technology

Response	Frequency	Percentage
Never	89	34.2%
Rarely	75	28.8%
Sometimes	55	21.2%
Often	27	10.4%
Always	14	5.4%
TOTAL	260	100%

Table 10 indicates that 34.2% of the respondents never actively sought out films or videos that use deep fake technology, 28.8% rarely did, 21.2% did sometimes, 10.4% often did, and 5.4% always did. This shows adolescents are not really interested in the context and film content; they just want to watch what satisfies them.

Respondents' Exposure to Deepfake Technology Affecting their Trust in Digital Media Content

To measure how exposure to deepfake technology affects respondents' trust in digital media content, questions were posed asking the respondents' whether the knowledge of deepfake technology used in films influence their trust in other digital media content, how confident they are in the authenticity of videos they see online, knowing that deepfake technology exists and how likely they are to question the authenticity of digital media content after learning about deepfake technology. The answers they gave have been statistically presented in the Tables 11 – 12 below.

Table 11

Influence of Deepfake Technology used in Films on Respondents Trust in Digital Media Content

Response	Frequency	Percentage
No effect	112	43%
Slightly decreased trust	61	23.5%
Moderately decreased trust	28	10.8%
Significantly decreased trust	28	10.8%
Completely lost trust	31	11.9%
TOTAL	260	100%

Table 11 shows that 43% of the respondents believe deep fake technology used in films does not affect their trust in digital media content. 23.5% trust was slightly decreased, and the moderately and significantly decreased effect shared the 10.8% ratio, respectively.

Meanwhile, 11.9% completely lost trust in digital media content as a result of deep fake technology used in films.

Table 12

Respondents Confidence in Authenticity of Videos they see Online

	Frequency	Percentage
Not confident at all	128	49.2%
Slightly confident	56	21.5%
Somewhat confident	49	18.9%
Very confident	27	10.4%
TOTAL	260	100%

Table 12 indicates that 49.2% of the respondents have no confidence at all in the Authenticity of videos they see online, 21.5% are slightly confident, 18.9% are somewhat confident, and 10.4% are very confident. This goes further to buttress respondents' level of awareness of deepfake technology use in films and their belief in its authenticity in films.

Identifying the Psychological Influence of Deepfake Exposure on Respondents

To identify the psychological influence of deepfake exposure on respondents, questions were posed asking the respondents' how discovering that a video is a deepfake affect their emotional response (e.g., anxiety, confusion), how often they feel uncertain about what is real and what is not in other videos after watching a deepfake video and if they find themselves thinking about deep fakes even when watching regular, non-altered films or videos. The answers they gave have been statistically presented in the Tables 13 – 14 below.

Table 13

Effects of Deepfake videos on Emotional Response of Respondents

Respondents	Frequency	Percentage
No effect	91	35%
slightly upset	82	31.5%
moderately upset	67	25.8%
very upset	20	7.7%
TOTAL	260	100%

Table 13 indicates that 35% of the respondents believe that deepfake videos have no effect on their emotional response, 31.5% are slightly upset, 25.8% are moderately upset and 7.7% are very upset. Majority believes it does not influence their emotions.

Table 14

How Often Respondents Feel Uncertain about what is Real and what is Not in Other Videos after Watching a Deepfake Video

Response	Frequency	Percentage
Never	23	8.9%
Rarely	56	21.5%
Sometimes	65	25%
Often	76	29.2%
Always	40	15.4%
TOTAL	260	100%

Table 14 shows that 8.9% of the respondents' claimed they had felt uncertain about what is real and what is not after watching a deepfake video, 21.5% says it rarely happens, 25% said sometimes. The majority believe happens often while 15.4% says it happens always. This

implies that respondents to a large extent need media literacy in order to sort out inconsistencies in how they perceive deepfake technology use in films.

Table 15

Whether Respondents Find Themselves Thinking about Deepfake Even when Watching Regular, Non-altered Films or Videos

	Frequency	Percentage
Never	24	9.2%
Rarely	51	19.6%
Sometimes	85	32.7%
Often	72	27.7%
Always	28	10.8%
TOTAL	260	100%

Table 15 indicates that 9.2% of the respondents have never thought about deepfake even after watching regular or non-altered films/videos, 19.6% rarely do, 32.7% sometimes, 27.7% often, and 10.8% always do.

Discussion

This study discusses findings involving adolescents' perception and exposure to deep fake technology in films and its subsequent impact on their trust in digital media content and their psychological state. The results are analyzed based on the objectives and research questions of the study.

The findings as regards the first research question reveals a moderate to high awareness about deepfake technology among adolescents. Many respondents indicated they were familiar with deep fakes, though their understanding of how they operate in films varied. This reflects the growing visibility of the topic on social media platforms and other digital

spaces where young people are actively engaged. Adolescents are increasingly becoming aware of how altered digital content can manipulate perceptions. However, the study shows a gap in the technical understanding of deep fakes. While students can identify fake videos, they need to fully grasp the technological complexity behind deepfake creation. This finding is consistent with similar studies by scholars like Adeola (2022), who found that while Nigerian youths are familiar with deep fakes, they often lack a deep understanding of the technology. The findings show that adolescents are generally aware of deep fake technology, primarily through social media and peer conversations. However, their technical understanding of manipulation techniques remains limited. This highlights the need for media literacy programs aimed at deepening adolescents' understanding of digital media alterations.

The findings for Research question 2 indicate that adolescents are moderately exposed to deep fakes in films and other digital content. A significant number of respondents acknowledged encountering videos or films that they suspected to be deep fakes. Exposure levels were found to correlate with their media consumption patterns; those who are more active on social media platforms like Instagram, TikTok, and YouTube reported higher exposure to deep fakes. Additionally, some respondents actively sought content that employed deep-fake technology for entertainment, reflecting a curiosity-driven consumption pattern. These findings align with Ibrahim (2021), who noted that young people are passive consumers of altered media and seek out and engage with digitally manipulated content for entertainment. Adolescents are moderately exposed to deep fakes, particularly through digital platforms. Although deep fake content is not yet dominant in mainstream films, adolescents who consume significant amounts of online video content, including user-generated content, are increasingly encountering deep fakes. This suggests that exposure is linked more closely to social media usage than traditional film consumption.

A notable finding that explains research question 3 is that exposure to deep fakes has led to a marked decrease in adolescents' trust in digital media content. Many respondents reported becoming more skeptical of the authenticity of videos they encounter online, particularly on social media platforms. Some indicated that learning about deep fakes had made them question the reliability of even trusted sources, such as news outlets or official

statements in video form. This skepticism is part of a broader trend where digital media consumers, particularly younger users, are increasingly questioning the authenticity of online content, a phenomenon supported by Okoye (2020), who found a similar decline in trust in digital media among young Nigerians due to the proliferation of altered content.

Exposure to deep fake technology significantly diminishes trust in digital media. Adolescents who are aware of the prevalence of deep fakes are more likely to question the authenticity of videos they see online, even when the content appears credible. This finding highlights the need for critical media literacy to empower young audiences to better navigate the digital landscape without losing trust in all media.

For Research question 4, findings have revealed the psychological impact of deepfake exposure on adolescents. Some respondents expressed feelings of confusion and uncertainty after learning that a video they believed to be confirmed was, in fact, a deep fake. For others, the constant questioning of the authenticity of the content they consume has led to a degree of anxiety and mistrust toward online platforms. Adolescents with higher exposure to deep fakes reported being more emotionally affected, mainly when deep fakes were used to manipulate serious situations like political speeches or news reports. This is in line with Ajiboye (2019), who found that exposure to manipulated media can lead to anxiety and confusion among young viewers. Deepfake exposure has a psychological influence, particularly in creating uncertainty and anxiety about the authenticity of digital content. Adolescents who encounter deep fakes regularly report feeling unsure about what is real and what is fabricated, leading to a general mistrust in media content and an emotional toll, such as heightened anxiety or frustration.

Conclusion

Deep fake technology is increasingly impacting the media consumption habits of Nigerian adolescents. While awareness is present, understanding of the full implications of this technology remains limited, particularly among younger adolescents. Exposure to deep fakes in films has a notable effect on adolescents' trust in digital content. Though not extreme, its psychological effects indicate a growing concern about digital literacy and media manipulation. The findings highlight the urgent need for intervention strategies,

including media literacy programs to educate adolescents about the existence, risks, and ethical concerns surrounding deep fake technology. Moreover, fostering critical thinking skills among adolescents is critical to helping them navigate the evolving digital media landscape effectively.

Recommendations

Based on the findings of this research, the following recommendations are proposed:

1. **Media Literacy Programs in Schools:** Schools, especially secondary institutions like Nnamdi Azikiwe University High School, should integrate media literacy courses into their curricula to educate students on deep-fake technology, digital content verification, and critical media consumption skills.
2. **Parental Involvement:** Parents should actively participate in their children's media consumption. They should guide them in distinguishing between real and manipulated content and encourage open discussions on the media they consume.
3. **Regulatory Frameworks:** The Nigerian government, through regulatory bodies, should enforce stricter laws and policies that address the ethical implications of deepfake technology and its misuse, particularly in content targeted at young audiences.
4. **Psychological Support:** Schools should also consider providing access to counseling services for adolescents who are exposed to disturbing deepfake content. This can help address any psychological distress caused by their inability to differentiate between real and fake media.

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