

Combating Misinformation in Marginalized Communities: Insights from Interdisciplinary Experts Through In-depth Interviews

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Misinformation is becoming a crucial problem in the digital areas and has been affecting digital media users' social and political behavior. The academics keenly focused on the various types of information in the US presidential elections in 2016 and the pandemic. It has become an important issue not only in developed countries but also in third-world countries. The marginalized communities have socioeconomic, religious, political, educational, and cultural factors, which may increase the exposure to misinformation among social media users. To find out the conceivable solutions to minimize misinformation in marginalized groups by focusing on the causes and impacts, this research aims to conduct in-depth interviews of (N = 15) experts across various fields such as communication, media, psychology, IT, and computer sciences. This comprehensive study will help to understand the psychological mechanisms behind the dissemination and exposure of misinformation, moreover, data experts will provide support in investigating the designs, trends, and the power of misinformation through the analysis. The ultimate goal of the study would be to provide effective approaches and solutions for marginalized communities to minimize the diffusion of misinformation. The insights collected from the interviews could provide support for the development of awareness programs, educational strategies, and training sessions.

1. Introduction

The advent of social media platforms has given rise to a significant platform for disseminating news material, hence establishing a novel ecosystem that facilitates the proliferation of misinformation (Pennycook & Rand, 2019a). The dissemination of misinformation is a dynamic phenomenon that undergoes continuous evolution, making the identification and tracking of its transmission among online people a challenging task (Derczynski et al., n.d.) and social media platforms especially Facebook implemented a variety of algorithmic modifications related to the policy to mitigate inaccurate information dissemination (Kanozia & Arya, 2021). The digital era presents a convergence of users, a diverse range of communication channels, and abundant opportunities for misinformation (Tumber & Waisbord, 2021). Now it is an important question what we do to discourage this kind of sharing and belief in fake or misinformation? (Pennycook & Rand, 2019b). According to the voices raised in the media, misinformation on social media is a major concern for the users who use it to collect information in crises (Hill, 2020). There is a tendency among individuals to conflate the concept of misinformation with the term disinformation. Misinformation refers to the unintentional dissemination of erroneous material, while disinformation involves intentional deceit, frequently relying on blatant fabrications (Tumber & Waisbord, 2021).

People from a wide range of fields, such as the public, authorities, academics, and journalists, create and/or spread false, misleading, or fake information without any meaning which is called misinformation (Pennycook et al., 2020). Cultural values, individual thought processes, social progress, new technologies, and changing media landscapes are just some of the fields that help us understand misinformation (Lewandowsky et al., 2012a). When there is an infodemic, false information spreads even more, which makes public health efforts less effective, creates confusion and doubt, and ultimately hurts people (Niemiec, 2020). A close relationship exists between misinformation, disinformation, rumors, and fake news. Even though rumors, misinformation, and disinformation are distinct ideas, they all have certain things in common with fake news (S. Haque et al., 2022). Internet use, political knowledge, and political participation are all correlated. This trend is having a big influence on elections, especially in developing countries like Bangladesh, India, and Pakistan. The Internet and social media are becoming increasingly important for disseminating political information (Ahmad et al., 2019). The most evident danger posed by misinformation is its ability to mislead voters and erode trust in the media. But the true threat that misinformation poses to democracy is less evident: the majority of Americans do not trust the false information they come across on the internet (Mortenson, 2021). The higher user engagement is associated with misinformation's growing influence in the social media environment. It also found a positive correlation between users' involvement in misinformation-rich social media content and the misinformation's continued influence (Mahmood & Shahzad, 2023).

This study's reasoning is based on a number of important factors. Events like the COVID-19 epidemic and the US presidential elections of 2016 show how much misinformation affects social and political actions. This problem is not exclusive to wealthy

countries; third-world nations are also heavily impacted, especially underprivileged communities, which are especially vulnerable. Misinformation is more likely to spread among these communities because of a variety of socioeconomic, religious, political, educational, and cultural variables. It is essential to comprehend these elements in order to create interventions that work. This multidisciplinary approach guarantees a comprehensive understanding of the issue and possible fixes. The goal of the research is to understand the psychological foundations of exposure to and the spread of misinformation. IT specialists will also examine patterns and trends in misinformation, adding to our understanding of its dynamics. The ultimate objective is to come up with workable plans to counter misinformation in underserved areas. Research findings may influence awareness campaigns, instructional plans, and training sessions, offering useful instruments to lessen the negative effects of misinformation. By employing an interdisciplinary approach and concentrating particularly on underrepresented communities, this research will close gaps in the body of existing literature. The results may have a big impact on how policies are made and how intervention initiatives are created. The study's overall goal is to provide practical answers to a critical worldwide problem by strengthening vulnerable populations' resistance to misinformation by utilizing expert views.

1.1 Objectives of the Study

- To investigate the causes of misinformation on social media users in marginalized communities.
- To find out the conceivable solutions to minimize misinformation in marginalized groups by focusing on the causes and impacts.

1.2 Research Questions

- **RQ1** What elements play a role in the dissemination of misinformation among Pakistan's underprivileged communities?
- **RQ2** What multidisciplinary approaches can lessen misinformation among marginalized populations?

2. Literature Review

Researchers have found that the catchiness of information including misinformation often drives its spread on social media rather than its veracity (Hassan et al., 2015). Policymakers and the social media sector are now faced with the complex task of mitigating the proliferation of fake news, misinformation, and hate speech (Chou et al., 2018). There are many ways for people to accept false and misinformation, which can result in the development of false beliefs that, once internalized, are extremely resistant to correction (Bessi et al., 2015). The dissemination of inaccurate information has the potential to induce widespread terror and dread among the populace, hence giving rise to a phenomenon known as mass hysteria (Ferrara, 2015). It plays a crucial role in supplying information that significantly influences the development of ideas, including individuals' political opinions (Feingold et al., 2017). We have all seen several terminologies that aim to delineate these escalating issues (such as false news, digital pollution, information disorder, and war) and

contextualize them within a historical framework like active measures, disinformation, misinformation, and warfare (Starbird et al., 2019). Computer- supported collaborative work and social computing (CSCW) analyzed the dissemination of misinformation and proposed potential remedies, mostly focusing on the Global North, which pertains to developed nations (M. M. Haque et al., 2020). However, during emergencies, there is a tendency to go back to conventional media sources due to a perceived lack of dependability on internet-based platforms (Reuter et al., 2017).

The advent of the Internet has brought about a significant transformation in the accessibility of information. Nevertheless, it has also played a role in enabling the dissemination of inaccurate or misleading content by eliminating the need for traditional "gate-keeping" systems, such as those used by professional editors (Bursztyn et al., 2020). People who use misinformation to undermine societies for political, economic, or both have an abundance of opportunities on social media, especially in the run-up to elections (Iosifidis & Nicoli, 2020). The challenges associated with rectifying misinformation are perhaps more troublesome than their widespread occurrence (Vraga & Bode, 2017). the provision of correct information would need a higher level of cooperation, which may pose challenges in terms of long- term sustainability (Bode & Vraga, 2018). The researchers see a notable disparity in the extent of fact-checking between genuine news material and false news content, with fact-checking being disseminated with a considerable temporal lag after the propagation of the initial misinformation (Egelhofer et al., 2020). It is important to persist in the examination of both the favorable and unfavorable consequences associated with the implementation of misinformation warnings within the domains of news media and political communications (Pennycook et al., 2017). Addressing the intricate and significant issue of misinformation dissemination on social media necessitates the use of a comprehensive array of tactics to achieve successful answers (Pennycook & Rand, 2019a). The process of fact-checking is limited to identifying material that is untrue rather than addressing the broader issues of misinformation, biased reporting, or deceptive presentation of events (Pennycook & Rand, 2019b). According to some researchers, the misinformation effect might occur when participants were given misleading information, but it wasn't encoded the first time, so their memory of the initial event was unaffected (Antonio, 2015). the examination of the interface that exists between the diverse quality of information accessible in the public domain and the inherent limitations of human cognition in comprehending and interpreting such information is a crucial avenue for advancement within this subject (Garrett & Bond, 2021).

Even when the misinformation is proven to be false, people's false beliefs about a subject or a person can frequently have a long-lasting impact on their attitudes and conclusions. However, if a correction is strong and of excellent quality, the initial misinformation impact will be lessened (Huang, 2017). For instance, research indicates that mindfulness training can lessen an individual's vulnerability to fraudulent phishing attacks. Therefore, social media mindfulness could assist users in overcoming prejudices that prevent them from critically analyzing dubious news items (Schuetz et al., 2021). Misinformation and fake news have the power to affect political environments. Since literate people can recognize the motivations and manipulations of content producers,

information and media literacy may be able to change that (Schuetz et al., 2021). Fact-checking can be effective even in political environments where opinions are closely linked to identity, as evidenced by recent efforts to correct misinformation (Nassetta & Gross, 2020). The challenge comes when we consider misinformation, disinformation, or fake news; we are not required by intellectual freedom to automatically dismiss such sources. Rather, they need to be carefully evaluated in the context of the library's collection development policy and mission (Oltmann, 2018). In order to identify and eliminate misinformation; civil society can and should act as an independent stakeholder and counterbalance, collaborating with commercial businesses and platforms (Mahmood & Shahzad, 2024).

3. Methodology

Public opinion work including quantitative surveys, in-depth interviews, and focus group discussions are some of the suitable methods to study misinformation (Lewandowsky et al., 2012b). We can combine ideas from different fields, like psychology, information and computer science, and social and political science minimize the effects of misinformation (Lewandowsky et al., 2012a). According to the previous studies, this research aims to conduct in-depth interviews of ($N = 15$) experts across various fields such as communication, media, psychology, IT, and computer sciences selected by snowball sampling. The criteria for the selection of the experts are they should have more than 5 years of research or professional expertise related to the issue of misinformation.

Table No 1: Demographics of the respondents (N = 15)

Field	Number of the Interviewees
Media and Communication	5
Psychology	5
IT & Computer Sciences	5

4. Results and Discussion

The results of in-depth interviews with 15 multidisciplinary experts in Pakistan are presented in this chapter, with an emphasis on the causes, effects, and remedies of misinformation in underserved populations. Snowball sampling was used to pick the experts, who represented three different fields: Media and Communication ($n=5$), psychology ($n=5$), and IT & Computer Sciences ($n=5$). To find significant trends in the expert comments, thematic analysis was employed.

4.1 Social, Technological, and Psychological Elements Influencing the Dissemination of Misinformation on Social Media Among Underrepresented Groups

Experts emphasized that low internet literacy, emotional susceptibility, and cognitive biases like confirmation bias make it easy for misinformation to proliferate in vulnerable populations. The issue is made worse by technological factors such as algorithmic echo chambers on Facebook and WhatsApp and a lack of content monitoring in Urdu and regional languages. These populations are especially vulnerable to deception since social faith in unofficial networks, religious leaders, and local elders frequently triumphs over fact-

based information.

Psychology experts highlighted emotional reactivity, confirmation bias, and limited digital literacy as important psychological factors. Even if something is untrue, people from marginalized backgrounds frequently believe it because it supports their group identification or worries.

"Cognitive shortcuts and emotions like fear and anger drive misinformation acceptance more than logic." (Psychologist, R6)

Computer science specialists identified algorithmic amplification, a dearth of regional language content regulation, and the pervasive usage of mobile internet without verification tools as crucial problems from a technological perspective.

"The platforms aren't designed with Urdu or Pashto moderation capabilities, so misinformation slips through easily." (IT Specialist, R11)

Social media specialists emphasized that, particularly in cases where formal information sources are mistrusted, trust in peer networks, community influencers, and religious leaders can be effective means of disseminating misinformation.

"In areas where state communication is weak, people believe whoever they already trust—even if the information is false." (Expert in Media, R3)

4.2 Particular Susceptibilities of Underrepresented Groups to Misinformation in Online Environments

Respondents concurred that inadequate critical thinking abilities, a lack of exposure to trustworthy news sources, and poor educational opportunities make underprivileged populations in Pakistan more vulnerable. Their capacity to check information is further diminished by structural injustices, such as political marginalization, gender disparities, and rural-urban differences. Numerous experts stressed that the attractiveness of conspiracy theories and misleading narratives is further enhanced by historical mistrust of established media and public institutions.

Experts from a variety of fields pointed out that marginalized populations are more vulnerable due to financial hardship, restricted access to formal education, and disconnection from reliable information sources. Psychologists went on to say that trauma and historical marginalization significantly diminish critical interaction with internet content.

"When you've always felt excluded from the system, you become more open to narratives—true or false—that confirm that feeling." (Psychologist, R7)

While IT professionals noted that marginalized people frequently rely on a single source or platform, like WhatsApp, where content is difficult to fact-check, media experts brought up the urban-rural information divide.

"They don't have the luxury of cross-checking sources—whatever shows up first is often believed." (Expert in IT, R10)

4.3 Role of Algorithms and Communication Platforms in Exposure of Marginalized Communities to Misinformation

Most experts condemned digital platforms for encouraging sensational and misleading information through algorithms that prioritize interaction over veracity. They pointed out that regional languages like Punjabi, Sindhi, or Pashto have inadequate content control systems, which leaves room for false material. The majority of experts concurred that present platform behavior significantly adds to the issue, even if several admitted that platforms may play a beneficial role through cooperation with local stakeholders and fact-checkers.

All three expert groups concurred that the engagement-driven algorithms of social media sites like Facebook, YouTube, and WhatsApp often magnify sensational or emotionally charged misinformation.

"Algorithms reward clicks and shares—not accuracy—so misinformation gets priority." (Researcher of Media, R2)

Computer scientists noted that misinformation in Punjabi or Urdu is rarely detected due to a lack of localized AI moderation and a lack of investment in South Asian language technologies.

"Most of the AI detection is built for English—our region is digitally invisible in that context." (Developer of IT, R9)

Experts recognized opportunities for positive use of these platforms, though, including collaborations with neighborhood organizations, community verification groups, and AI-based solutions catered to Pakistan's linguistic variety.

4.4 Tactics or Treatments Work Best to Lessen Misinformation in Underserved Communities

The creation of mobile-based fact-checking tools in native languages, community-driven digital literacy training, and training for religious and community leaders to become information gatekeepers are just a few examples of the low-cost, locally relevant initiatives that experts suggested. Many also emphasized how crucial it is to include nearby NGOs and educational institutions in awareness-raising initiatives. One common recommendation was to disseminate verifiable content via radio and WhatsApp, which are media that are often used in these areas.

Media experts suggested radio-based awareness campaigns, fact-checking in local languages, and educating local journalists to serve as reliable sources in underprivileged communities.

"Community radio and WhatsApp groups can be tools for truth if used correctly." (Expert in Media, R4)

In order to refute misleading narratives with culturally relevant facts, psychologists suggested behavioral change communication techniques that encourage skepticism of emotional triggers and employ storytelling.

"Facts aren't enough. You must swap out the damaging tale for a better one. (Psychologist, R8)

To increase algorithmic transparency and moderation, IT specialists promoted mobile-friendly verification bots, Urdu-language browser plugins, and cooperation with tech platforms.

"We need to meet the user where they are—on a low-end phone, using WhatsApp, and in Urdu." (R13, Computer Scientist)

4.5 Interdisciplinary Cooperation to Strengthen Community Resistance to Misinformation

Cross-disciplinary initiatives were enthusiastically endorsed by respondents, who suggested that communication specialists, psychologists, and technologists should collaborate to develop culturally appropriate counter-misinformation tactics. While media specialists spearhead community initiatives and computer specialists create verification tools, psychologists could handle cognitive biases. Some argued for national task teams or university-led hubs that could unite a variety of skills to combat misinformation in a more methodical and long-term manner.

The experts unanimously advocated for cross-sector, integrated initiatives that include technology, psychological resilience building, and media outreach. IT specialists offer platform-level solutions, media specialists create culturally appropriate messaging, and psychologists can handle behavioral vulnerabilities.

"We need tech to support human behavior, and human behavior to shape how tech is used." (Psychologist, R5)

Many recommended that commercial tech companies, public society, and universities collaborate to create misinformation-focused research hubs, awareness campaigns, and training initiatives.

"This can't be done by one field alone—it requires a national, interdisciplinary response." (Media Scholar, R1)

5. Conclusion

By consulting with interdisciplinary specialists in media and communication, psychology, and computer science/IT, this study aimed to investigate the intricate dynamics of misinformation in Pakistan's underprivileged populations. The study determined the main social, technological, and psychological elements influencing the dissemination of misinformation by conducting in-depth interviews with 15 experts. Additionally, it looked at the particular vulnerabilities of underprivileged groups and assessed the possibilities for interdisciplinary cooperation as well as the function of digital platforms in resolving the problem.

The results showed that limited critical thinking abilities, emotional bias, and cognitive shortcuts are important psychological factors that contribute to the acceptance of misinformation. Misinformation has flourished due to technological factors such as

algorithmic amplification, a lack of local-language content monitoring, and the mobile-first digital environment. Social trust in unofficial networks, such as peer groups centered in families and religious leaders, frequently surpasses trust in official or validated information.

According to experts, historical exclusion from public debate, limited access to various media, digital illiteracy, and low levels of education make underprivileged communities particularly vulnerable. Digital platforms have the potential to be useful interventions if they are tailored to local circumstances, even though they also have the ability to spread misleading narratives. Technology advancements like AI-powered local language fact-checkers, psychologically informed communication techniques, and community-driven media literacy initiatives were among the suggested remedies. The experts' agreement that no one field can address the issue of misinformation on its own is a key finding of this study. Sustainable and scalable solutions can only be created by combining the strengths of media, psychology, and technology through cross-sectoral collaboration. Misinformation is a pervasive social issue that impacts civic engagement, trust, and identity. It is not just a technical error or a communication breakdown. The risks are higher for marginalized populations. This study demonstrates that in order to counteract misinformation and create technologically resilient, critically aware, and socially empowered communities in Pakistan, an interdisciplinary, localized, and inclusive approach is necessary.

5.1 Social Implications of the Study

The study emphasizes how urgently localized and multidisciplinary responses to misinformation are needed. In addition to investing in public-interest technology that facilitates fact-checking and regional language moderation, policymakers ought to give priority to digital literacy instruction, especially in underserved areas. To create culturally relevant counter-narratives, media organizations and journalists need to collaborate closely with psychologists and community leaders. Adopting inclusive content moderation methods and promoting algorithmic transparency should be encouraged—or even required—by IT corporations.

5.2 Recommendations for Future Research

This research could be expanded in future studies by involving members of the marginalized community as subjects to directly examine their lived experiences with misinformation. Longitudinal studies could evaluate the effects of particular initiatives over time, like localized tech tools or digital literacy programs. More complex patterns of vulnerability and resistance might also be revealed by comparative research between Pakistan's various regions or between urban and rural groups. In order to counteract misinformation and create digitally resilient, critically aware, and socially empowered communities in Pakistan, this study demonstrates the importance of an interdisciplinary, localized, and inclusive strategy.

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