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Media Literacy in the Age of Misinformation: A Mixed-Methods Analysis of Adult Media Literacy across Urban and Rural Areas of Pakistan

Ibtesam Mazahir [a, b, *], Sidrah Yaseen [c]

[a] Mohammad Ali Jinnah University, Pakistan
[b] Chulalongkorn University, Thailand
[c] Dubizzle Labs, Dubai, United Arab Emirates

Abstract

This study investigates the state of media literacy among adults in Pakistan in the context of rising misinformation, political polarization, and digital inequality. Employing a mixed-methods sequential explanatory design, the research combines survey data from 500 participants across four provinces with 30 in-depth interviews to explore how socio-demographic factors, such as education, age, gender, and digital access, influence media literacy. Quantitative results reveal that only 41 % of respondents can identify biased news, 18 % have engaged in content creation, and 33 % understand privacy settings on social media. Urban respondents performed significantly better than rural ones, with education level positively correlating with media literacy ($r = 0.62$, $p < 0.01$) and age negatively associated with digital skills ($r = -0.54$, $p < 0.05$). Thematic analysis of qualitative data highlights distrust in mainstream media, generational gaps in media use, and socio-cultural barriers, particularly affecting women in rural areas. These findings underscore the urgent need for inclusive and context-sensitive media literacy initiatives in Pakistan. The study contributes to global discourses on digital inclusion and supports Sustainable Development Goal 4 on equitable access to quality education.

Keywords: media literacy, digital divide, misinformation, adult education, Pakistan, mixed-methods research, urban-rural disparities, gender and media, critical digital skills.

1. Introduction

Pakistan's media landscape has experienced a dramatic transformation since the early 2000s, marked by the liberalization of television and radio and the explosive growth of digital platforms. With over 100 private TV channels, 200 FM radio stations, and more than 87 million social media users as of 2023, access to information has never been broader (DataReporta, 2023). However, this expansion has also brought significant challenges, including rampant misinformation, political polarization, and a persistent digital divide — only about 35 % of adults in Pakistan use the internet, and rural areas remain particularly underserved (Pakistan Bureau of Statistics, 2022; Strafasia, 2023).

Media literacy – the ability to access, analyze, evaluate, and create media messages – is increasingly recognized as a crucial skill for informed citizenship and societal resilience against digital threats (Ikram, Rahman, 2023; Hobbs, 2023). Academic research underscores that media literacy is essential not only for countering misinformation but also for promoting critical thinking, autonomy, and democratic participation (Ikram, Rahman, 2023; Strafasia, 2023). For instance, researchers found that media students in Pakistan, especially those exposed to analytical

* Corresponding author
E-mail addresses: ibtesam.mazahir@gmail.com (I. Mazahir)

coursework, demonstrated higher news media literacy and critical thinking skills compared to their peers. However, most research and educational initiatives in Pakistan have focused on youth and students, leaving the adult population, who make up 65 % of the country, largely unexamined in terms of their media literacy competencies (Ikram, Rahman, 2023).

The challenges in improving media literacy are compounded by socio-demographic disparities. Rural populations, women, and older adults face significant barriers to both basic and media literacy, stemming from limited educational opportunities, infrastructural deficiencies, and socio-cultural norms (Pakistan Bureau of Statistics, 2022; Strafasia, 2023). Studies highlight that media literacy initiatives are often ineffective unless they are accompanied by broader educational reforms and efforts to bridge the digital divide (LinkedIn Pulse, 2024). Furthermore, research suggests that while basic media usage is widespread, the ability to critically evaluate and verify information remains limited among the general population, making them vulnerable to digital manipulation and propaganda (Eurasia Review, 2023; Strafasia, 2023).

This study addresses these gaps by systematically assessing media literacy levels among Pakistani adults, with particular attention to the influence of education, age, gender, and access to technology. By employing a mixed-methods approach—combining quantitative surveys and qualitative interviews across urban and rural regions—this research aims to provide a nuanced understanding of the current state of media literacy in Pakistan. The findings are intended to inform targeted educational programs and policy interventions, contributing to the global discourse on media literacy in low- and middle-income countries (LMICs) and supporting UNESCO's Sustainable Development Goal 4, i.e. Quality Education.

2. Materials and methods

This study employed a mixed-methods sequential explanatory design, integrating quantitative and qualitative approaches in two distinct phases (Creswell, Plano Clark, 2017). The quantitative component involved a cross-sectional survey aimed at measuring media literacy levels and identifying socio-demographic predictors. Subsequently, the qualitative phase utilized semi-structured interviews to contextualize the statistical findings and explore participants' lived experiences with media engagement.

This design prioritized quantitative data collection, followed by a qualitative exploration, allowing quantitative results to inform the selection of interview participants and guide thematic analysis (Ivankova et al., 2006). This sequential integration facilitated a deeper understanding of the patterns and anomalies observed in the survey data.

The target population comprised adults aged 18 years and above residing across Pakistan's four provinces. A stratified random sampling technique was adopted, ensuring proportional representation based on provincial demographics. A total of 500 respondents participated, distributed as follows:

– Punjab: 40 % (n = 200)
– Sindh: 25 % (n = 125)
– Khyber Pakhtunkhwa: 20 % (n = 100)
– Balochistan: 15 % (n = 75)

Inclusion criteria were:

– Minimum five years of residency in the selected province
– Regular media consumption of at least one hour per day via television, radio, or digital platforms

Participants for the qualitative phase (n = 30) were selected through purposive sampling from the pool of survey respondents. Selection was stratified to ensure diversity across two key dimensions:

– Geography: Urban (n = 15) and rural (n = 15)
– Media literacy levels: High (top 25 %), medium (middle 50 %), and low (bottom 25 %) quartiles.

Recruitment was facilitated via phone calls and community liaisons. The qualitative phase achieved a 92 % response rate. A 35-item questionnaire, adapted from the European Media Literacy Index (EMLI), was used to assess four core domains of media literacy (Lessenski, 2022).

1. Access – Frequency and diversity of media use (e.g., "How often do you verify news via multiple sources?")

2. Analysis – Critical evaluation skills (e.g., "Can you identify sponsored content in news articles?")

3. Evaluation – Awareness of bias and misinformation (e.g., "How confident are you in detecting deepfake videos?")

4. Creation – Participation in content generation (e.g., "Have you ever shared original media commentary?")

The instrument was pilot-tested with 50 adult participants and demonstrated acceptable internal consistency (Cronbach's α = 0.82). For Qualitative Interviews, a semi-structured interview guide was developed to explore:

– Trust in media institutions

– Challenges in navigating digital platforms

– Cultural and gender-based barriers to media literacy

Data Collection Procedure was done in two phases, i.e

Quantitative Phase: Face-to-face surveys were conducted by trained enumerators between March and April 2025. Each interview lasted approximately 25 minutes. To ensure data quality, 10 % of the responses were randomly checked for validation and consistency.

Qualitative Phase: In-depth interviews were held from May to June 2025 in the respondents' preferred languages, including Urdu, Sindhi, and Pashto. Interviews lasted between 45 and 60 minutes, were audio-recorded, and transcribed verbatim for analysis.

Quantitative Analysis: Data were analyzed using SPSS v28. The following procedures were employed:

– Descriptive statistics: Frequencies, means, and standard deviations to describe media literacy scores

– Inferential statistics:

Multiple linear regression to identify predictors such as age, education, and device access

ANOVA to examine differences across provinces and urban-rural settings

Qualitative Analysis: Interview transcripts were analyzed using thematic analysis in NVivo. The process involved:

– Open coding to generate initial categories

– Axial coding to identify thematic relationships and recurring patterns (Braun, Clarke, 2006)

– Integration of findings from the quantitative phase to inform and interpret qualitative insights, particularly focusing on outliers (e.g., individuals with high media literacy despite limited formal education)

All participants received bilingual consent forms (Urdu/English) detailing the purpose, procedures, and their rights as participants. Survey data were anonymized using unique IDs; interviewees were assigned pseudonyms. Female enumerators conducted interviews with rural women to respect cultural norms. In conflict-prone areas, collaboration with local NGOs ensured safe and respectful data collection.

3. Discussion

Media literacy has evolved as a foundational skill for navigating today's complex digital landscape. It is defined as the ability to access, analyze, evaluate, and create messages across a variety of contexts (Buckingham, 2003). This competency has gained significance with the proliferation of digital content and the increasing challenge of misinformation. The integration of digital and media literacy into formal curricula has been recommended as a crucial 21st-century educational goal, emphasizing the need for critical thinking about media (Hobbs, 2010).

The challenges posed by new communication technologies have been highlighted, with concerns that although access to digital tools is increasing, users' critical engagement remains uneven (Livingstone, 2004). Media literacy has also been linked to digital and information literacies, with arguments for an integrated approach to helping users manage the overload of online content (Koltay, 2011).

Literature from the Global South highlights significant inequalities in digital literacy. The Western-centric discourse on digital participation has been critiqued, with calls to recognize how the next billion users — largely from the Global South — engage with technology in distinct and context-specific ways (Arora, 2019). Community media practices in countries like Kenya and

South Africa have been shown to foster localized participatory engagement, emphasizing the role of culture and infrastructure in shaping media literacy (Tully, Ekdale, 2014).

In Pakistan, similar disparities are evident. Limited digital access, particularly among women, continues to hinder health communication and digital inclusion, shaped by cultural, gender, and socioeconomic factors (Zakar et al., 2014). The rise of mobile journalism in Pakistan has reshaped news production and consumption but has also facilitated the spread of fake news, especially among populations lacking media literacy training (Jamil, 2021).

Young people, despite being active digital users, often engage with media in uncritical ways. Media literacy has been identified as a core civic competency necessary for supporting participatory democracy (Mihailidis, Thevenin, 2013). The concept of "digital agency" – defined as the ability to make informed and ethical decisions in digital spaces – has been introduced as a framework for empowering youth (Passey et al., 2018). Structured media literacy interventions have been shown to reduce susceptibility to fake news among adolescents, strengthening the case for educational programs that build critical evaluation skills (Lemaire et al., 2025).

Access to digital tools and platforms remains deeply gendered and geographically uneven. In Pakistan, traditional gender norms continue to limit women's digital participation, especially in rural settings (Zakar et al., 2014). These findings are echoed in studies showing that women in developing countries face unique barriers in digital environments due to safety concerns, family expectations, and limited device access (Arora, 2019).

Generational divides also widen the digital literacy gap. Older adults, who often rely on traditional media, tend to lack the skills needed to critically engage with online content. This contributes to their vulnerability to misinformation and highlights the importance of inclusive media literacy strategies that consider all age groups (Livingstone, 2004; Hobbs, 2010).

4. Results

The study surveyed 500 individuals across Pakistan's four provinces using a stratified random sampling approach. Table 1 presents the demographic characteristics of the sample. The gender distribution included 58 % males and 42 % females, with participants almost evenly split between rural (52 %) and urban (48 %) settings. In terms of education, 62 % had attained at least secondary-level education, while 28 % reported daily internet use, indicating moderate digital engagement in the sample.

Table 1. Demographic Profile of Respondents (N = 500)

Variable	*Category*	*Frequency (n)*	*Percentage (%)*
Gender	Male	290	58
	Female	210	42
Residential Location	Urban	240	48
	Rural	260	52
Education Level	≥ Secondary	310	62
	< Secondary	190	38
Daily Internet Usage	Yes	140	28
	No	360	72

Media literacy was assessed across three domains: critical understanding, content creation, and ethical awareness. Table 2 outlines the findings.

Critical Understanding: Only 41 % of participants could accurately identify biased or misleading news content. Urban respondents demonstrated significantly higher proficiency, scoring 22 % higher than their rural counterparts.

Content Creation: A mere 18 % of the sample reported having created or shared original digital media, suggesting low engagement with participatory online practices.

Ethical Awareness: Just 33 % of respondents reported an understanding of privacy settings on social media platforms, pointing to significant gaps in digital safety awareness.

Table 2. Media Literacy Performance Across Domains

Domain	*Indicator*	*Result*
Critical Understanding	% identifying biased or misleading news	41 %
	Urban vs. Rural score difference	Urban scores
Content Creation	% who have created or shared original content	18 %
Ethical Awareness	% understanding social media privacy settings	33 %

Statistical tests were performed to examine the relationships between demographic factors and media literacy performance:

Table 3. Correlational Analysis of Media Literacy Predictors

Predictor	Correlation Coefficient (r)	Significance (p-	Interpretation
Education	0.62	$p < 0.01$	Strong positive correlation
Age	-0.54	$p < 0.05$	Moderate negative correlation

A positive correlation was found between education level and media literacy ($r = 0.62$, $p < 0.01$), confirming that individuals with higher educational attainment had better skills in evaluating, interpreting, and ethically using media. Age exhibited a negative correlation with digital proficiency ($r = -0.54$, $p < 0.05$), suggesting that younger respondents had better digital skills, although they often lacked critical discernment.

The qualitative phase, comprising 30 semi-structured interviews, added depth to the quantitative findings. Thematic analysis revealed the following prominent themes:

Distrust in News Media: Participants across regions expressed growing skepticism toward mainstream television channels, citing political bias, sensationalism, and lack of neutrality. Many questioned the credibility of evening news and expressed preference for alternative sources, including YouTube commentators and WhatsApp groups.

“TV channels just repeat what politicians say. I don’t trust them anymore.” — Male, 34, Sindh (Urban)

Generational Gaps in Media Use: The interviews revealed stark intergenerational differences in media consumption patterns. Older adults predominantly accessed television and radio, often without critical engagement, while younger users gravitated toward social media platforms but lacked skills to assess content validity.

“My son uses Facebook all day, but he believes everything he reads there.” — Female, 52, Khyber Pakhtunkhwa (Rural)

Cultural and Gender-Based Barriers: In rural areas, traditional gender norms restricted women’s access to digital technologies. Many female respondents indicated limited access to smartphones or internet, often mediated by male relatives.

“I need to ask my brother even to use his phone. He decides what I can watch.” — Female, 28, Balochistan (Rural)

These findings underscore the socio-cultural constraints on digital inclusion and media literacy, particularly among rural women.

5. Conclusion

This study provides a comprehensive, mixed-methods analysis of media literacy among adults in Pakistan, revealing critical gaps in digital comprehension, critical evaluation, and content creation. Despite widespread media consumption, only a minority of participants demonstrated the capacity to critically assess or ethically engage with digital content. These deficits were particularly pronounced among older adults, rural populations, and women, groups disproportionately affected by systemic educational, infrastructural, and cultural barriers.

Education emerged as the strongest predictor of media literacy, suggesting that targeted interventions in adult education could significantly improve digital competence. Meanwhile, age and rural location were negatively associated with media literacy, reinforcing the importance of contextualized and inclusive strategies. The study also highlighted how distrust in mainstream

media and the growing influence of social media platforms complicate information discernment, particularly for younger and less formally educated users.

Qualitative insights further revealed that gendered access to digital technology and the persistence of patriarchal norms hinder women's full participation in digital spaces. These findings echo global calls for culturally sensitive and equity-driven media literacy programs, particularly in low- and middle-income countries (LMICs).

In addressing these challenges, policymakers and educators must adopt a multidimensional approach that integrates formal education, digital infrastructure development, community engagement, and localized content design. Media literacy should not be limited to the youth or formal institutions; it must be extended to the adult population through non-formal channels, workplace learning, and grassroots community programs. By doing so, Pakistan can empower its citizens to navigate the digital age with discernment, agency, and resilience, paving the way toward a more informed, inclusive, and democratic society.

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