

The Relationship between Perceived Transparency and Trust in AIGC-Generated News Content among individuals with tertiary education or higher: A Case Study of Shandong Province

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Abstract

This study examines the relationship between perceived transparency and trust in AI-generated content (AIGC) news among tertiary-educated populations. Drawing on survey data from 408 respondents with tertiary education or higher in Shandong Province, China, we investigated perceptions of transparency in AIGC-generated news and trust levels toward such content. Statistical analysis using SPSS revealed two key findings: First, demographic characteristics, including age and educational attainment, significantly affect audiences' perceived transparency of AIGC-generated news and their trust in this content. Second, perceived transparency exhibits a positive correlation with trust, indicating that higher levels of perceived transparency correspond to increased trust among audiences. These findings advance quantitative understanding of the transparency-trust relationship in AIGC-generated news consumption and offer practical implications for enhancing the credibility and acceptance of AI-generated journalism.

Keywords

AIGC; transparency, perceived news transparency, trust, college students

1. Introduction

The rapid advancement and iterative refinement of Artificial Intelligence Generated Content (AIGC) have introduced novel paradigms in news production, enabling an increasing number of journalists to leverage its efficiency for article editing or auxiliary writing. The quality of AIGC-generated news substantiates its reliability and convenience. Notable advantages include the capacity to produce high-caliber articles in minimal time, thereby enhancing efficiency, reducing costs, and expediting workflows—hallmarks of AI's prominence. By harnessing natural language processing and big data analytics, AI autonomously aggregates and filters information from online sources and social media, thereby streamlining the procurement of news materials (Wang, 2025).

Nevertheless, AIGC technologies for article generation remain imperfect. The extent of audience trust in current AIGC-produced content, as well as the potential association between perceived transparency of AIGC-generated news and trust therein, represents an underexplored domain. This study undertakes a preliminary

investigation of these issues, aiming to derive initial findings that may inform future enhancements in AIGC news generation.

2. Literature Review

In recent years, Artificial Intelligence Generated Content (AIGC) has achieved substantial progress in news content generation. AI technologies can autonomously produce articles, blogs, and news reports based on keywords, themes, or user requirements. For instance, Tencent's "Xiaoice" and "Dreamwriter" writing robots are capable of automatically composing reports in finance, sports, and entertainment, markedly enhancing news production efficiency (Wang et al., 2025). However, empirical studies indicate that the emergence of new mainstream media has precipitated a crisis of trust among young student populations, who assign relatively low credibility evaluations to such outlets (Qiang and Hu, 2025). These findings underscore AIGC's contributions to news gathering, organization, article generation, and public sentiment monitoring and analysis. They further suggest a hypothesis that variations in age, geographic region, and educational attainment among young audiences may yield differential perceptions of transparency and trust in AIGC-generated news. Accordingly, the following hypothesis is proposed:

H1: Demographic factors, including age and educational attainment, influence audiences' perceptions of transparency in current AIGC-generated news content as well as their trust in such content.

Given that AIGC-generated news relies on algorithmic processes, examining the relationship between public perceptions of AIGC transparency and trust is, to some extent, tantamount to investigating the interplay between algorithmic transparency and trust. Perception of trust refers to the subjective evaluation by individuals or groups of the credibility or reliability of others, organizations, or entities. Such evaluations are grounded in observations of behavior, competence, and integrity, and are shaped by personal experience, values, and sociocultural contexts. Trust perception is widely recognized as a critical variable influencing organizational management, team collaboration, and social action (Zhang and Guo, 2025).

From a technical standpoint, the decision-making processes of AI, particularly deep learning models, are often difficult to interpret. This lack of interpretability can introduce opacity and unpredictability in new media content production, thereby diminishing user trust in the output. Credibility refers to the capacity to inspire public trust (Ding and Wang, 2025). Scholars employing mixed-methods research have found that when users perceive algorithmic workflows as transparent and fair, their trust in the algorithm or its provider increases accordingly (Liu et al., 2024). It follows that AIGC-generated news should explicitly disclose data sources and the underlying logic of content generation to enhance audience perceptions of transparency. Only when audiences engage critically with such content does trust emerge; conversely, high trust in AIGC output implies relatively strong perceived transparency. Thus, the transparency of AIGC-generated content shapes audience perceptions of transparency in AIGC news, which in turn influences trust in that content. This relationship leads to the following hypothesis regarding perceived transparency and trust in AIGC:

H2: Higher perceived transparency of AIGC-generated news is associated with increased audience trust therein.

Natural Language Generation (NLG) technologies have been widely adopted across domains to facilitate rapid news content production (Hai, 2025). Leveraging big data algorithms, news aggregators can efficiently compile requisite data and conduct quantitative analyses, presenting information intuitively to the public and thereby enhancing operational efficiency in journalism. Within the field of news dissemination, algorithmic techniques have surpassed traditional editorial capabilities in select areas. Specifically, algorithms assist news organizations in identifying events, furnishing comprehensive contextual details, and analyzing textual and visual elements to generate automated headlines (Sun, 2025).

Given the finite workforce in journalism, employing AIGC for certain tasks conserves substantial human resources, particularly for standardized processes such as interviewing and promotion, thereby augmenting timeliness and creativity. For instance, during the 2024 National People's Congress and Chinese People's Political Consultative Conference, People's Daily New Media utilized large-scale AI models to produce a series of AIGC creative products, including the micro-video *AI Co-Created Epic: Such Splendid Rivers and Mountains*, which garnered over 460 million views. Nonetheless, algorithmic applications remain

contingent on journalists' specified needs; absent such directives, integration proves infeasible. Typically, algorithmic recommendations revolve around a central theme, delivering multifaceted related articles to foster diversity and innovation in reporting.

Although AI excels in news gathering, editing, and preliminary dissemination, its limitations become pronounced in dynamic and complex environments (Wang, 2025). Beyond these advantages, AIGC introduces challenges such as "deepfakes" and technological alienation, precipitating trust deficits and posing significant threats to media credibility (Yang, 2025).

As an emerging digital technology, AIGC has garnered varying degrees of public trust. This study investigates audience acceptance of AIGC-generated news by examining how transparency is perceived and the extent to which AI is employed in journalistic practice. Using quantitative methods and controlling for demographic variables including age and geographic location, we analyze the relationship between perceived transparency and trust in AIGC-generated news among tertiary-educated audiences. The findings offer practical guidance for AIGC news production and contribute to the growing body of research on AI-mediated journalism.

3. Research Design

While scholars have proposed various conceptualizations of transparency, no consensus definition has emerged. Building on existing literature, we define transparency as the disclosure and explanation of information that reveals the underlying logic of algorithmic decision-making processes, thereby reducing information asymmetry between systems and users. This conceptualization encompasses three dimensions, informational, conceptual, and procedural, each characterized by accessibility and interpretability (Wu and Wu, 2024). Media trust represents a perceptual construct shaped by audience evaluations. It manifests as subjective assessments that vary across contexts and evolve over time. In the case of mainstream media, trust reflects not only the ability to gain public approval through news content but also the symbolic authority derived from institutional reputation and audience acceptance (Qiang and Hu, 2025).

This study posits that greater transparency in AIGC-generated news content, within a defined scope, elevates audience-perceived transparency, which in turn enhances trust. For AIGC, transparency comprises algorithmic transparency (as applied in journalism), data transparency, feedback and explanatory mechanisms, regulatory frameworks, and technological innovation coupled with user education. Taking college students in Shandong Province as an exemplar, when encountering AIGC-generated current affairs reports on information platforms, curiosity about production logic prompts scrutiny of transparency. However, absent clear disclosure of algorithmic foundations, data provenance, or explanatory feedback on generation processes, students observe content homogenization across platforms. Such "black-box" outputs, when deployed in academic or discursive contexts, encounter skepticism due to questionable verifiability. Consequently, diminished perceived transparency precipitates reduced trust. This interplay motivates the quantitative examination of the relationship between perceived transparency and trust in AIGC.

3.1 Participants

A total of 408 valid questionnaires were collected online from individuals with college education or above in Shandong Province who had prior exposure to AIGC-generated news. The sample comprised 199 males (48.775%) and 209 females (51.225%). Age distribution was as follows: 9 participants under 18 years (2.206%), 311 aged 18–25 years (76.225%), 77 aged 25–30 years (18.873%), and 11 aged 30 years or older (2.696%). Educational attainment included 101 with associate degrees (24.755%), 219 with bachelor's degrees (53.676%), and 88 with master's degrees or higher (21.569%). Residential city tiers were distributed as follows: 156 in new first-tier or second-tier cities (38.235%), 124 in third-tier cities (30.392%), 86 in fourth-tier cities (21.078%), 28 in first-tier cities (6.863%), and 14 in fifth-tier cities (3.431%).

3.2 Instruments

3.2.1 Trust Scale

Trust in AIGC-generated news was measured using the scale developed by Wu Dan and Wu Yuxuan (2024) from Wuhan University. This instrument consists of five items rated on a 5-point Likert scale ranging from 1

(strongly disagree) to 5 (strongly agree). Higher composite scores indicate greater trust in AIGC-generated news.

3.2.2 Perceived Transparency Scale

Perceived transparency of AIGC-generated news was assessed with an adapted version of the scale originally developed by Al-Natour et al. The adapted scale comprises nine items rated on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). Higher composite scores reflect greater perceived transparency in AIGC-generated news (Ding, 2025).

4. Hypothesis Testing

Table 1 Descriptive Analysis of Exposure to AIGC

Variable	Response	Frequency	Percentage
Exposure to AIGC	Yes	408	100.000%

As shown in Table 1, all 408 respondents (100%) reported prior exposure to AIGC, confirming that the entire sample had encountered AIGC-generated content.

Table 2 Descriptive Analysis of Gender

Variable	Response	Frequency	Percentage
Gender	Male	199	48.78%
	Female	209	51.23%

As indicated in Table 2, the sample consisted of 199 males (48.775%) and 209 females (51.225%). The gender distribution was relatively balanced, with a slightly higher proportion of females, allowing the sample to adequately represent perspectives across gender groups.

Table 3 Descriptive Analysis of Age

Variable	Response	Frequency	Percentage
Age	Under 18 years	9	2.21%
	18–25 years	311	76.23%
	25–30 years	77	18.87%
	Over 30 years	11	2.70%

As shown in Table 3, 9 respondents were under 18 years (2.206%), 311 were aged 18–25 years (76.225%), 77 were aged 25–30 years (18.873%), and 11 were over 30 years (2.696%). The age distribution reveals that the majority of the sample (76.225%) falls within the 18–25-year bracket.

Table 4 Descriptive Analysis of Educational Attainment

Variable	Response	Frequency	Percentage
Educational Attainment	Associate degree	101	24.76%
	Bachelor's degree	219	53.68%
	Master's degree or above	88	21.57%

Table 4 presents the distribution of educational attainment. Of the respondents, 101 held associate degrees (24.755%), 219 held bachelor's degrees (53.676%), and 88 held master's degrees or higher (21.569%).

Table 5 Descriptive Analysis of Monthly Income/Living Expenses

Variable	Response	Frequency	Percentage
Monthly Income/Living Expenses	200–1,000 CNY	21	5.15%
	1,000–3,000 CNY	338	82.84%
	3,000–5,000 CNY	28	6.86%
	Above 5,000 CNY	21	5.15%

Table 5 summarizes the distribution of monthly income or living expenses. Twenty-one respondents reported 200–1,000 CNY (5.147%), 338 reported 1,000–3,000 CNY (82.843%), 28 reported 3,000–5,000 CNY (6.863%), and 21 reported above 5,000 CNY (5.147%). The majority of the sample (82.843%) fell within the 1,000–3,000 CNY range.

Table 6 Descriptive Analysis of City Tier

Variable	Response	Frequency	Percentage
City Tier	First-tier cities	28	6.86%
	New first-tier/second-tier cities	156	38.24%
	Third-tier cities	124	30.39%
	Fourth-tier cities	86	21.08%
	Fifth-tier cities	14	3.43%

As shown in Table 6, the largest group resided in new first-tier or second-tier cities ($n = 156$, 38.235%), followed by third-tier cities ($n = 124$, 30.392%), fourth-tier cities ($n = 86$, 21.078%), first-tier cities ($n = 28$, 6.863%), and fifth-tier cities ($n = 14$, 3.431%). Overall, the sample was predominantly drawn from new first-tier/second-tier and third-tier cities, which together accounted for the majority of respondents.

Table 7 Reliability Analysis of Trust Scale

Number of Items	Cronbach's α
5	0.826

As presented in Table 7, the Cronbach's α coefficient for the trust dimension in AIGC-generated news was 0.826, exceeding the conventional threshold of 0.7. This indicates satisfactory internal consistency and stable measurement performance, confirming the high reliability of the data.

Table 8 Reliability Analysis of Perceived Transparency Scale

Number of Items	Cronbach's α
9	0.904

Table 8 shows that the Cronbach's α coefficient for the perceived transparency dimension was 0.904, surpassing the 0.7 benchmark. The results demonstrate robust internal consistency and reliable measurement, underscoring the quality of the data.

Table 9 Validity Analysis

Validity Test	Statistic
Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy	0.911
Bartlett's Test of Sphericity	Approx. $\chi^2 = 1330.220$
	df = 171
	$p = 0.000$

As indicated in Table 9, validity was assessed using the KMO and Bartlett's tests. The KMO value was 0.911, exceeding the 0.7 threshold, confirming the suitability of the questionnaire for factor analysis. Bartlett's test yielded an approximate χ^2 of 1330.220 with 171 degrees of freedom and a significance level of $p = 0.000$, leading to rejection of the null hypothesis of sphericity.

Table 10 Correlation Analysis Between Trust and Perceived Transparency

Variable	Trust	Perceived Transparency
Trust	1	
Perceived Transparency	0.504***	1

* $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

Table 10 presents the correlation between trust and perceived transparency. A significant positive correlation was observed ($r = 0.504$, $p < 0.001$), indicating that higher perceived transparency is associated with greater trust. This finding lends empirical support to H2, which posits that elevated perceived transparency in AIGC-generated news corresponds to increased audience trust.

Table 11 Regression Analysis of Perceived Transparency on Trust

Regression Analysis				
	Unstandardized Coefficients		t	p
	B	Standard Error		
Constant	0.495	0.095	5.200	0.000***
Perceived Transparency	0.634	0.018	35.663	0.000***
R ²	0.758			

Adjusted R ²	0.757
F	F=1271.830, $p=0.000$
Durbin-Watson	2.026

Dependent Variable: Trust

* $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

In Table 11, trust serves as the dependent variable and perceived transparency as the independent variable in a multiple regression model. The unstandardized coefficient for perceived transparency is 0.634 (SE = 0.018), with $t = 35.663$ and $p < 0.001$, indicating a statistically significant positive effect on trust. The model accounts for 75.8% of the variance in trust ($R^2 = 0.758$). An F-test confirms the overall significance of the regression ($F = 1271.830$, $p < 0.001$), supporting the validity of the fitted equation:

$$\text{Trust} = 0.495 + 0.634 \times \text{Perceived Transparency}.$$

These findings provide empirical support for H2, which posits that higher perceived transparency of AIGC-generated news is associated with greater audience trust.

Table 12 Analysis of Differences in Trust Toward AIGC-Generated News Across Gender, Age, Education, and City Tier

Item	Category	Trust in AIGC-Generated News	χ^2	p
		Strongly Disagree	Disagree	Neutral
Gender	Male	12 (42.86%)	16 (43.24%)	32 (50.00%)
	Female	16 (57.14%)	21 (56.76%)	32 (50.00%)
Age	Under 18	0 (0.00%)	0 (0.00%)	1 (1.56%)
	18–25	4 (14.29%)	5 (13.51%)	37 (57.81%)
	25–30	23 (82.14%)	27 (72.97%)	22 (34.38%)
	Over 30	1 (3.57%)	5 (13.51%)	4 (6.25%)
Education	Associate Degree	1 (3.57%)	2 (5.41%)	15 (23.44%)
	Bachelor's Degree	3 (10.71%)	3 (8.11%)	23 (35.94%)
	Master's or Above	24 (85.71%)	32 (86.49%)	26 (40.62%)
City Tier	Tier 1	2 (7.14%)	1 (2.70%)	7 (10.94%)
	Tier 2	6 (21.43%)	18 (48.65%)	19 (29.69%)
	Tier 3	11 (39.29%)	8 (21.62%)	19 (29.69%)
	Tier 4	9 (32.14%)	8 (21.62%)	16 (25.00%)
	Tier 5	0 (0.00%)	2 (5.41%)	3 (4.69%)

* $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

Table 12 presents the distribution of trust in AIGC-generated news across demographic subgroups defined by gender, age, education level, and city tier.

For gender, males accounted for 42.86% of “strongly disagree,” 43.24% of “disagree,” 50.00% of “neutral,” 48.18% of “agree,” and 50.89% of “strongly agree” responses. The corresponding figures for females were 57.14%, 56.76%, 50.00%, 51.82%, and 49.11%. The chi-square test yielded $\chi^2 = 1.201$, $p = 0.878$, indicating no significant gender-based difference in trust.

Regarding age, the under-18 subsample was negligible, with near-zero representation across all response categories. Among respondents aged 18–25, the proportions were 14.29% (“strongly disagree”), 13.51% (“disagree”), 57.81% (“neutral”), 92.73% (“agree”), and 96.45% (“strongly agree”). Distinct patterns emerged for the 25–30 and over-30 groups. The chi-square test produced $\chi^2 = 244.754$, $p < 0.001$, confirming highly significant age-related differences in trust. For education level, the distribution varied markedly across associate, bachelor's, and postgraduate categories (e.g., 10.71% of bachelor's-degree holders selected “strongly disagree”). The chi-square test gave $\chi^2 = 238.224$, $p < 0.001$, demonstrating highly significant differences attributable to educational attainment.

With respect to city tier, the proportions differed across tiers 1 through 5 (e.g., 7.14% of tier-1 residents selected “strongly disagree”), yet the chi-square test returned $p = 0.373$, indicating no significant association between city tier and trust.

These results lend empirical support to H1, which states that demographic factors such as age and educational attainment significantly shape audience perceptions of trust in current AIGC-generated news content.

Table 13: Analysis of Differences in Perceived Transparency of AIGC-Generated News Across Gender, Age, Education, and City Tier

Item	Category	Perceived Transparency of AIGC-Generated News	χ^2	p
		Completely Disagree	Disagree	Slightly Disagree
Gender	Male	13 (56.52%)	12 (44.44%)	16 (43.24%)
	Female	10 (43.48%)	15 (55.56%)	21 (56.76%)
Age	Under 18	0 (0.00%)	0 (0.00%)	0 (0.00%)
	18–25	8 (34.78%)	8 (29.63%)	5 (13.51%)
	25–30	13 (56.52%)	16 (59.26%)	30 (81.08%)
	Over 30	2 (8.70%)	3 (11.11%)	2 (5.41%)
Education	Associate Degree	1 (4.35%)	4 (14.81%)	2 (5.41%)
	Bachelor's Degree	7 (30.43%)	4 (14.81%)	3 (8.11%)
	Master's or Above	15 (65.22%)	19 (70.37%)	32 (86.49%)

* $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

Table 13 reveals the distribution of perceived transparency in AIGC-generated news across demographic subgroups.

In terms of gender, males comprised 56.52% of “completely disagree,” 44.44% of “disagree,” and 43.24% of “slightly disagree” responses, among others; the corresponding proportions for females were 43.48%, 55.56%, and so forth. The chi-square test yielded $\chi^2 = 3.396$, $p = 0.758$, indicating no significant gender effect on perceived transparency.

With respect to age, respondents aged 18–25 accounted for 34.78% of “completely disagree,” 29.63% of “disagree,” and 95.00% of “agree” selections. Distinct patterns were observed in the 25–30 and over-30 cohorts (e.g., 8.70% of those over 30 selected “completely disagree”). The chi-square test produced $\chi^2 = 263.851$, $p < 0.001$, confirming a highly significant age-related influence, with marked disparities in attitude distributions across age groups.

Regarding educational attainment, associate-degree holders represented 4.35% of “completely disagree” and 14.81% of “disagree” responses; bachelor's-degree holders contributed 30.43% and 14.81%, respectively; and postgraduate respondents dominated the lower end of the scale, with 65.22% and 70.37%. The chi-square test returned $\chi^2 = 252.555$, $p < 0.001$, demonstrating a highly significant effect of education level and pronounced differences in response patterns across attainment categories.

These findings provide empirical support for H1, which posits that demographic factors, particularly age and educational attainment, significantly moderate audience perceptions of transparency in current AIGC-generated news content.

Table 14: Variance Explained

Factor	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Eigenvalue	% of Variance	Cumulative %	Eigenvalue	% of Variance	Cumulative %
1	7.587		54.192	54.192	7.587	54.192
2	0.705	5.032	59.224	—	—	—
3	0.603	4.309	63.533	—	—	—
4	0.56	4	67.534	—	—	—
5	0.553	3.952	71.486	—	—	—
6	0.52	3.715	75.201	—	—	—
7	0.491	3.506	78.707	—	—	—
8	0.479	3.423	82.13	—	—	—
9	0.472	3.37	85.5	—	—	—
10	0.452	3.227	88.727	—	—	—
11	0.425	3.037	91.763	—	—	—

12	0.412	2.942	94.705	–	–	–
13	0.382	2.729	97.434	–	–	–
14	0.359	2.566	100	–	–	–

Table 14 indicates that Factor 1 has an eigenvalue of 7.587, accounting for 7.587 units of total variance. Its variance explained is Erika 54.192%, meaning that Factor 1 captures 54.192% of the total variance in the original variables. Following rotation, the eigenvalue, percentage of variance explained, and cumulative percentage for Factor 1 remain unchanged at 7.587, 54.192%, and 54.192%, respectively, demonstrating that rotation does not alter the explanatory contribution of this factor.

Factor 2 exhibits an eigenvalue of 0.705 and explains 5.032% of the total variance. The cumulative variance explained by the first two factors reaches 59.224%. These values are identical post-rotation, confirming that rotation leaves the variance attribution of Factor 2 unaffected. Factor 3 has an eigenvalue of 0.603, accounting for 4.309% of the variance, with a cumulative total of 63.533%. Rotation preserves these figures, indicating stability in Factor 3's contribution to total variance.

Factors 4 through 14 display eigenvalues ranging from 0.560 to 0.359, with individual variance explanations between 4.000% and 2.566%. The cumulative percentage increases progressively, attaining 100.000% at Factor 14. All post-rotation eigenvalues, percentages of variance explained, and cumulative percentages match their pre-rotation counterparts, signifying that the rotation procedure does not modify the proportional variance explained by any factor.

Table 15: Rotated Factor Loadings

Item	Factor 1
Believes that news generated by AIGC is reliable and controllable, capable of operating safely and stably	-0.735
Believes that news generated by AIGC is transparent and interpretable, facilitating user comprehension of the news	-0.727
Believes that news generated by AIGC protects users' personal data without infringing on privacy or data security	-0.789
Believes that news generated by AIGC has clear accountability, enabling prompt identification of responsible parties in cases of infringement	-0.643
Believes that news generated by AIGC is diverse and inclusive, free from any discrimination or bias	-0.737
Can clearly determine whether the news viewed was generated by AIGC	-0.728
Believes that news media employ understandable methods to explain the basic rules of AIGC-generated news	-0.737
Can adjust algorithm settings to modify AIGC news search results	-0.735
Can request human review of AIGC-generated news that I do not endorse	-0.741
Believes that the platform will respond promptly to my feedback on issues with AIGC-generated news	-0.742
Complaints submitted regarding issues with AIGC news content will receive substantive resolution	-0.776
Believes that news media regularly publish inspection reports on the objectivity and fairness of AIGC-generated news	-0.696
Believes that news media explicitly assume responsibility for errors in AIGC-generated news content	-0.771
Believes that AIGC-generated news treats all users equally, without deliberately concealing content	-0.739

Table 15 shows that the item “Believes that news generated by AIGC is reliable and controllable, capable of operating safely and stably” has a factor loading of –0.735 on Factor 1, indicating a strong negative association. The item “Believes that news generated by AIGC is transparent and interpretable, facilitating user comprehension of the news” loads at –0.727, which likewise reflects a strong negative correlation. Loadings for the remaining items, which cover data protection, clear accountability, diversity and inclusion, source identification, media rule explanation, algorithm adjustability, human review requests, platform responsiveness, complaint resolution, and related dimensions, range from –0.643 to –0.789. All loadings are negative, suggesting that respondents who endorse these views exhibit characteristics opposite to those defining Factor 1.

Chi-square tests from the difference analyses reveal the following: for gender, $\chi^2 = 1.201$, $p = 0.878$ (trust) and $\chi^2 = 3.396$, $p = 0.758$ (perceived transparency), indicating no significant gender differences in either construct. Age yields $\chi^2 = 244.754$, $p < 0.001$ (trust) and $\chi^2 = 263.851$, $p < 0.001$ (perceived transparency), confirming highly significant age effects. Education level produces $\chi^2 = 238.224$, $p < 0.001$ (trust) and $\chi^2 = 252.555$, $p < 0.001$ (perceived transparency), demonstrating highly significant differences. City tier shows no

significant association with trust ($p = 0.373$). These results support H1, which posits that demographic factors, notably age and education, influence audience trust in current AIGC-generated news content.

Trust and perceived transparency are positively correlated ($r = 0.504$, $p < 0.001$), indicating a moderately strong relationship whereby higher perceived transparency corresponds to greater trust. In a multiple regression with trust as the dependent variable and perceived transparency as the predictor, the unstandardized coefficient is 0.634 ($SE = 0.018$), $t = 35.663$, $p < 0.001$, confirming a significant positive effect. This finding supports H2: greater perceived transparency in AIGC-generated news is associated with elevated audience trust.

5. Results and Discussion

The findings indicate that audience trust in AIGC-generated news increases when the content is perceived as controllable and reliable, with clear accountability, diverse and inclusive reporting, and transparent interpretability. Trust is further enhanced when AIGC news protects personal data privacy and when media outlets clearly explain the operational rules of AIGC-generated content in accessible terms. In essence, higher perceived transparency in AIGC-generated news corresponds directly to greater trust.

The hypotheses are supported as follows. Demographic factors, particularly age and educational attainment, significantly shape both perceived transparency and trust in current AIGC-generated news. Moreover, perceived transparency and trust exhibit a positive and moderately strong association, which confirms that greater transparency fosters higher trust.

Nevertheless, the study's scope is constrained by a relatively straightforward methodology, limited sample coverage, and reliance on a single analytical approach. These limitations temper the generalizability of the conclusions, which should be regarded as preliminary and intended primarily to inform future research.

As AI advances rapidly amid accelerating lifestyles and an expanding volume of social news, human-generated reporting alone can no longer meet societal demand, and AIGC has assumed a pivotal role. To ensure the authenticity and effectiveness of news content, AI systems must elevate the quality and transparency of generated outputs. AIGC service providers bear a duty to disclose algorithmic functions, potential risks, and user data practices while granting users informed choice, which empowers them to decide whether and how to engage the technology (e.g., consenting to data access) (Bi and Li, 2024).

Mainstream media, however, must retain editorial primacy and treat AI as an auxiliary tool rather than a substitute. Overreliance on automation risks eroding core journalistic values. Only by preserving human oversight can news retain its warmth and credibility, which ultimately earns public trust. With AI assistance, journalists can devote greater attention to uncovering deeper narratives, analyzing multifaceted perspectives, and anticipating event trajectories. In addressing AIGC-induced distortions, journalists must assert uniquely human agency and creativity, which counters algorithmic bias by promoting constructive values. For users, this ecosystem yields more accessible, comprehensive, and tailored news, which enhances comprehension and reinforces trust (Bi and Li, 2024).

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Conflicts of Interest

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