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Social Media Use and Media Literacy as Predictors of Citizens' Digital Attitudes in the MENA Region: A Quantitative Cross-Sectional Study

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Abstract

The rapid proliferation of social media has transformed political communication, public diplomacy, and citizens' digital attitudes across the MENA region—a context marked by hybrid political systems, intensive disinformation, and accelerating digital transformation. This study examines how social media use and media literacy are associated with five key constructs—institutional trust, trust in media and digital sources, attitudes toward political narratives, attitudes toward digital diplomacy, and security and disinformation perceptions—among 250 citizens of Egypt, Jordan, Tunisia, and Kuwait, alongside generational and educational differences across all constructs. Using a quantitative cross-sectional design, data were collected via an online questionnaire between January and March 2025 and analyzed through simple linear regression (H_1 – H_{10}) and Kruskal–Wallis tests (H_{11} – H_{24}). Twenty-one of twenty-four hypotheses were confirmed. Social media use was a strong negative predictor of institutional trust ($\beta = -0.750$, $R^2 = 0.562$) and a strong positive predictor of political narrative awareness, digital diplomacy attitudes, and security perceptions; media literacy showed a parallel pattern. Educational level was the strongest differentiating factor in media literacy competencies ($\chi^2 = 175.874$), far exceeding generational effects. Notably, trust in media and digital sources showed no significant association with either predictor or demographic variable across four independent tests, suggesting that—unlike the other constructs examined—media trust in the MENA region is shaped less by individual competencies or behaviors and more by structural and political factors. These findings support extending formal, curriculum-based media literacy education and point to the need for media trust research grounded in non-Western political contexts.

Keywords: social media use; media literacy; institutional trust; political narratives; digital diplomacy; disinformation; security perception; MENA region



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1. Introduction

The rapid proliferation of social media platforms has fundamentally transformed the dynamics of political communication, public diplomacy, and citizen engagement across the globe. With over 5.22 billion social media users worldwide by 2024, representing 63.8% of

the global population, digital platforms have evolved from tools of interpersonal communication into arenas where political narratives are constructed and contested, institutional trust is eroded or reinforced, and diplomatic strategies are deployed at unprecedented scale and speed (Kemp, 2024). In this context, understanding how social media shapes citizens' attitudes, perceptions, and trust has become one of the central challenges of contemporary communication research.

The MENA region occupies a particularly significant position within this global digital transformation. Characterized by some of the fastest-growing rates of digital penetration worldwide, a predominantly young population, and a complex interplay between authoritarian political structures and dynamic digital public spheres, the region offers a particularly rich and theoretically generative context for examining the relationships between digital media use and citizens' political attitudes (Arab Barometer, 2022). Recent scholarship has highlighted digitalization as a significant yet under-researched driver of change in state–society relations across the region, with e-governance and social media activism emerging as key arenas in which governance grievances are expressed and contested (Zintl & Houdret, 2025). The Arab Spring of 2010–2012 demonstrated the transformative potential of social media as instruments of political mobilization (Howard et al., 2011), while the subsequent decade revealed the capacity of the same platforms to be appropriated by state and non-state actors alike as instruments of surveillance, narrative control, and information manipulation. Garbe and Maerz (2026) describe this broader shift as “authoritarian informationalism,” marked by the involvement of a wider range of actors beyond the state, more targeted and pre-emptive forms of digital control, and a reach that extends from domestic to transnational domains—a transformation that increasingly blurs the boundaries between authoritarian and democratic information environments. This dual character of digital platforms—simultaneously emancipatory and repressive—makes the MENA region an indispensable context for empirical investigation.

Existing research has established robust associations between social media use and declining institutional trust in Western democratic contexts. Kiratli (2023) demonstrated that higher social media use is associated with lower trust in the European Union among European citizens, with particularly detrimental effects in regions with wider internet connectivity. Similarly, van Zoonen et al. (2024) found that institutional trust affects the reasons citizens share unverified information on social media, with higher institutional trust paradoxically reducing motivation to authenticate information. However, these findings have been developed predominantly within Western liberal democratic contexts, leaving a significant empirical gap regarding how these dynamics operate in authoritarian and hybrid political systems where institutions systematically use digital platforms as instruments of control rather than accountability. Within the MENA region specifically, Masoudnia et al. (2023) demonstrated that social media consumption significantly increases political distrust among Egyptian citizens by amplifying perceptions of corruption and poor government performance, while Alodat et al. (2023) found that social media use has a significant positive effect on political participation among Jordanian youth, with gender moderating this relationship.

Media literacy has emerged as a central construct in contemporary responses to disinformation and narrative manipulation. Huang et al. (2024), in a meta-analysis of 49 experimental studies encompassing 81,155 participants, found that media literacy interventions generally improve resilience to misinformation, with particularly strong effects on misinformation discernment and reduced sharing of false information. Yet the relationship between media literacy and broader political attitudes—including institutional trust, perceptions of political narratives, and security awareness—remains insufficiently explored in non-Western contexts. Emerging evidence from the region suggests this gap is particularly

consequential: in a survey of Arab university students across the UAE, Saudi Arabia, and Egypt, [Abu Backer and Awad \(2025\)](#) found that although the large majority of respondents (81%) were able to recognize misinformation, this awareness did not translate into reduced engagement, with excessive social media use instead correlating negatively with overall life satisfaction. This disjuncture between recognition and behavior underscores the need to examine media literacy not merely as a competency in isolation, but in relation to broader political attitudes and institutional perceptions—the central aim of the present study. Similarly, [Darwish \(2025\)](#), in a mixed-methods study of UAE adolescents, found persistent gaps in critical media literacy competencies despite high levels of digital engagement, with gender and age emerging as significant moderators of digital inequality—a finding that underscores the importance of examining demographic differences in media literacy, as the present study does. Particularly, the question of whether higher media literacy leads to more differentiated trust or to generalized skepticism toward all information sources remains theoretically contested, with recent research suggesting the possibility of unintended paradoxical effects ([Vraga & Tully, 2021](#)).

Digital diplomacy has similarly attracted growing scholarly attention, with researchers examining how governments leverage social media platforms to advance diplomatic objectives and project soft power ([Manor, 2023](#); [Bjola & Manor, 2022](#)). However, existing literature has been predominantly actor-centered, analyzing how diplomatic actors use digital platforms rather than how citizens perceive and understand digital diplomacy as a phenomenon of contemporary international relations. Recent audience-centered research has begun to address this gap: [Vincent et al. \(2026\)](#), in a survey of 308 social media users exposed to Chinese digital diplomacy in Africa, found that such exposure significantly and positively shaped respondents' perceptions of and engagement with the diplomatic actor, with educational attainment directly influencing these outcomes. This audience-centered perspective remains underdeveloped in the MENA context specifically, particularly where governments including the UAE, Qatar, Saudi Arabia, and Jordan have invested heavily in sophisticated digital diplomatic infrastructures ([Antwi-Boateng & Al Mazrouei, 2021](#)).

This study addresses these gaps by focusing on two specific theoretical puzzles that remain underexplored in non-Western contexts. The first concerns the mechanisms through which digital engagement—whether through social media use or media literacy—shapes institutional trust under hybrid and authoritarian political systems, where the relationship between digital platforms and political authority differs fundamentally from Western liberal democratic contexts. The second concerns the structural versus individual drivers of media trust: specifically, whether trust in media and digital sources in authoritarian media ecosystems responds to individual-level competencies and behaviors, or whether it is governed primarily by structural and political factors that lie beyond individual control. To address these puzzles, the study examines the relationships between social media use, media literacy, and five key constructs—institutional trust, trust in media and digital sources, attitudes toward political narratives, attitudes toward digital diplomacy, and security and disinformation perceptions—among 250 citizens from four representative MENA countries: Egypt, Jordan, Tunisia, and Kuwait, while also analyzing generational and educational differences across all measured constructs. Drawing on a quantitative cross-sectional design with a standardized instrument combining adaptation of the Arab Barometer Wave VII methodology with original scales, the study tests 24 hypotheses organized around two predictor variables, five outcome variables, and two demographic variables. The 24-hypothesis structure reflects the comprehensive and symmetric nature of the research design—two predictors tested against five outcomes, with generational and educational differences examined for all seven constructs—rather than a claim to broad theoretical novelty across all findings. The genuinely novel contributions of the study are

twofold: the cross-contextual generalization of digital engagement and institutional trust patterns to hybrid and authoritarian MENA systems, and the empirical demonstration that trust in media and digital sources resists explanation by any individual-level predictor across four independent statistical analyses—a finding that challenges individualistic accounts of media trust formation and points toward the primacy of structural factors in authoritarian media ecosystems.

2. Materials and Methods

2.1. Research Design

This study employed a quantitative cross-sectional survey design, selected as the most appropriate methodological approach for testing the proposed hypotheses and measuring the relationships between the constructs of interest across a geographically diverse sample. Cross-sectional designs are well-suited for examining the distribution of attitudes, perceptions, and behaviors at a single point in time and for identifying statistically significant associations between predictor and outcome variables. Constructs were clearly operationalized and measured through a standardized instrument, with relationships among variables analyzed using inferential statistical methods.

2.2. Instrument Development

Data were collected using a standardized self-administered questionnaire developed through an iterative process resulting in seven versions across three rounds of expert validation. Within each round, experts sometimes proposed multiple successive revisions before consensus was reached on the final version of the instrument. The instrument was grounded in the Arab Barometer Wave VII methodology (Arab Barometer, 2022), one of the most established regional survey instruments for measuring public opinion in the MENA region. Original scales were developed to measure constructs not covered by existing instruments—specifically attitudes toward digital diplomacy, perceptions of security threats and disinformation, and media literacy as an operationalized digital competency. Items adopted without modification from Arab Barometer Wave VII, modified items, and entirely original items were systematically tracked throughout the development process to ensure transparency and methodological rigor.

The development process involved three rounds of expert validation, each conducted by a different expert and resulting in one or more revised versions of the instrument. A first expert, a statistician, recommended structural revisions to scale composition, including the conversion of originally ordinal and nominal Arab Barometer items into five-point Likert-type batteries, and the separation of institutional trust and media trust into two distinct subscales. A second expert, a thematic specialist in digital communication and MENA studies, introduced further modifications to item wording and scale focus, ensuring theoretical alignment between item content and the constructs being measured. A third expert, a methodologist, provided final recommendations regarding item clarity and cultural appropriateness for the MENA context. Specifically, the third expert recommended reformulating social media use items to be more behaviorally focused and neutral; separating the trust scale into two distinct sections measuring institutional trust and trust in media and digital sources respectively; removing items measuring personal exposure or tracking behavior from the political narratives and digital diplomacy scales; expanding the security and disinformation scale from six to eight items by adding two new items addressing the societal consequences of disinformation; and renaming the final scale to Media Literacy, removing a previously included security perception component. Following expert validation, the instrument was translated into Arabic by a professional translator, with a back-translation procedure conducted to verify linguistic and conceptual equiva-

lence between the English and Arabic versions. The final version of the instrument was approved by all three experts prior to pilot testing.

2.3. Measures

The final version of the questionnaire consisted of eight sections. Section 1 collected demographic information across eight items covering age, gender, country of residence, educational level, employment status, dominant social media platform used, and perceived most effective digital channel for government–citizen communication. Sections 2 through 7 comprised six Likert-type scales measuring seven key constructs, with all items rated on a five-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). The total number of Likert-type items across all scales was 53. Of these seven constructs, two—social media use and media literacy—served as predictor variables in the research model, while the remaining five—institutional trust, trust in media and digital sources, political narratives, digital diplomacy, and security and disinformation—served as outcome variables.

Social media use (Section 2, 9 items) measured the intensity and nature of social media use for information-seeking, political participation, and content sharing (e.g., “I use social media to follow current social and political events”; “I use social media to express my opinion on social or political issues”; “I use social media to share content related to current social or political topics”). This scale served as the first predictor variable in the research model.

Institutional trust (Section 3A, 6 items) measured respondents’ trust in key state institutions, including the government, judiciary, parliament, armed forces, and the general functioning and communication of state institutions (e.g., “I trust the government of my country”; “I trust that state institutions work in the interest of citizens”; “I trust state institutions when they communicate with citizens”).

Trust in media and digital sources (Section 3B, 6 items) measured respondents’ trust in various media and digital information sources, including state media, independent media, international media, social media platforms, and official government accounts on social media (e.g., “I trust information published by state media”; “I trust information I receive through social media”; “I believe social media can be a reliable source of information when used critically”).

Political narratives (Section 4, 8 items) measured attitudes toward the role and influence of political narratives on social media, focusing on the perceived capacity of digital platforms to shape public opinion, distribute political messages, and influence citizens’ interpretation of social events (e.g., “Social media play an important role in spreading political narratives”; “Political actors use social media to shape public opinion”; “Political narratives on social media can influence how citizens interpret social events”).

Digital diplomacy (Section 5, 8 items) measured attitudes toward the significance and effectiveness of digital diplomacy in contemporary international relations, including perceptions of government transparency, accessibility, and the capacity of digital platforms to facilitate diplomatic processes (e.g., “Digital diplomacy plays an important role in contemporary international relations”; “Governments that actively use social media appear more accessible to citizens and the international public”; “The use of social media in diplomatic communication can improve a country’s image in the world”).

Security and disinformation (Section 6, 8 items) measured perceptions of various digital security threats and the societal dangers of disinformation, including foreign political influence, cyberattacks, extremist recruitment, digital surveillance, and the consequences of fake news for institutional trust and social stability (e.g., “The spread of disinformation and fake news online represents a serious threat to national security”; “Disinformation on

social media can undermine citizens' trust in institutions"; "Fake news on social media can cause social divisions and instability").

Media literacy (Section 7, 8 items) measured respondents' self-reported media literacy competencies in the digital environment, focusing on active verification behaviors, critical evaluation of sources, and responsible information sharing (e.g., "Before sharing news on social media, I check the reliability of its source"; "I am able to assess whether information on social media is reliable"; "I try to distinguish facts from opinions in information I see on social media"). This scale served as the second predictor variable in the research model. The scale was developed drawing on Hobbs's (2010) five-dimensional model of media literacy—encompassing access, analysis, evaluation, creation, and action—and the UNESCO Media and Information Literacy (MIL) framework (Grizzle et al., 2014), which operationalizes media literacy as a set of critical competencies enabling citizens to access, evaluate, and act upon information responsibly. Items were designed to capture three core dimensions particularly relevant to the digital context examined in this study: active source verification (e.g., checking reliability before sharing), critical evaluation of information and its origins, and responsible and reflective information sharing practices. It should be noted that, consistent with common practice in large-scale survey research, the scale relies on self-reported behavioral intentions and perceived competencies rather than objective performance measures.

The complete questionnaire, including all items across all sections, is provided in Appendix A.

While the number of items per scale is relatively modest compared to some established instruments, several considerations support the adequacy of the measurement approach. First, all scales underwent three rounds of expert validation by specialists in statistics, digital communication, and MENA studies, ensuring content validity through systematic review of item relevance, clarity, and cultural appropriateness. Second, the Exploratory Factor Analysis conducted on the main sample confirmed the theoretically proposed seven-factor structure, with all items loading on their intended factors and no significant cross-loadings observed—providing empirical evidence of structural validity. Third, the consistently high Cronbach's Alpha values across all seven scales (ranging from 0.865 to 0.969) confirm strong internal consistency. Taken together, these three sources of evidence—expert content validation, EFA-confirmed factor structure, and high internal consistency—provide a convergent basis for confidence in the construct validity of the instrument, while acknowledging that future research employing confirmatory factor analysis on independent samples would further strengthen these claims.

2.4. Pilot Study and Reliability

Prior to the main data collection, a pilot study was conducted with 30 respondents drawn from the target population to assess the psychometric properties of the instrument. Internal consistency was evaluated using Cronbach's Alpha coefficient, with values above 0.70 considered acceptable, above 0.80 good, and above 0.90 excellent. All seven scales demonstrated high internal consistency, with Cronbach's Alpha values ranging from 0.876 to 0.968—well above the minimum acceptability threshold. Specifically, the social media use scale achieved $\alpha = 0.953$, institutional trust $\alpha = 0.931$, trust in media and digital sources $\alpha = 0.876$, political narratives $\alpha = 0.919$, digital diplomacy $\alpha = 0.960$, security and disinformation $\alpha = 0.953$, and media literacy $\alpha = 0.968$. These results confirmed that no revisions to the instrument were necessary prior to the main data collection phase.

2.5. Participants and Data Collection

The study was conducted in four representative MENA countries: Egypt, Jordan, Tunisia, and Kuwait. These countries were selected to ensure geographic, political, and cultural representativeness within the region, encompassing North African and Levantine contexts as well as Gulf and transitional political systems.

Data were collected between January and March 2025 via an online questionnaire administered through Google Forms. The questionnaire was made available in both English and Arabic to accommodate respondents' language preferences and was distributed through a combination of purposive sampling and snowball sampling. The questionnaire was distributed to approximately 1000 contacts via the research team's social media platforms and personal networks. All items were set as mandatory within the Google Forms platform, technically preventing partial completion. Only fully completed questionnaires were included in the analysis, resulting in a final sample of $N = 250$ respondents, representing an approximate response rate of 25%, which is considered acceptable for online research conducted using snowball sampling methodology in the MENA region.

Purposive sampling criteria explicitly targeted equal representation across gender, age groups, educational levels, and countries, resulting in a balanced demographic distribution. This approach was adopted to ensure the comparability of subgroup analyses across all demographic categories examined in H11–H24, rather than to claim representativeness of the broader MENA population. It should be noted that this sampling strategy, combined with the exclusive use of online distribution channels, systematically excludes non-internet users and digitally marginalized populations—a limitation that is discussed in Section 4.5. Gender was equally distributed (female: $n = 125$, 50.0%; male: $n = 125$, 50.0%). Three age groups were approximately equally represented: 18–29 years ($n = 84$, 33.6%), 30–45 years ($n = 83$, 33.2%), and 46 years and older ($n = 83$, 33.2%). Country representation was balanced: Egypt ($n = 63$, 25.2%), Jordan ($n = 63$, 25.2%), Kuwait ($n = 62$, 24.8%), and Tunisia ($n = 62$, 24.8%). Educational levels were evenly distributed across four categories: secondary school ($n = 62$, 24.8%), Bachelor's degree ($n = 63$, 25.2%), Master's degree ($n = 63$, 25.2%), and PhD ($n = 62$, 24.8%). Regarding employment status, many respondents were employed ($n = 142$, 56.8%), followed by self-employed respondents ($n = 55$, 22.0%) and students ($n = 53$, 21.2%).

2.6. Data Analysis

All data were analyzed using IBM SPSS Statistics (version 29; IBM Corp., Armonk, NY, USA). The analysis proceeded in four sequential phases. In the first phase, descriptive statistics were computed to characterize the demographic composition of the sample. In the second phase, the internal consistency of all seven scales was assessed using Cronbach's Alpha coefficient on the main sample data ($N = 250$). In the third phase, Exploratory Factor Analysis (EFA) was conducted using Principal Axis Factoring with Promax rotation to verify the construct validity of the instrument. The Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy and Bartlett's Test of Sphericity were computed prior to factor extraction to confirm data suitability for factor analysis.

In the fourth phase, research hypotheses were tested using two statistical procedures. Simple linear regression was applied to test hypotheses H_1 – H_{10} , examining the predictive relationships between the two predictor variables—social media use (Section 2) and media literacy (Section 7)—and the five dependent variables: institutional trust (Section 3A), trust in media and digital sources (Section 3B), attitudes toward political narratives (Section 4), attitudes toward digital diplomacy (Section 5), and security and disinformation perceptions (Section 6). This approach was selected on the recommendation of a statistical expert, as it provides a more precise estimation of the direction and magnitude of predictive effects than correlation analysis alone, through standardized regression coefficients (β)

and coefficients of determination (R^2). Prior to analysis, all assumptions of simple linear regression were verified, including independence of residuals (Durbin–Watson statistic), linearity and homoscedasticity (scatterplot analysis), normality of residuals (histogram and Q-Q plot analysis), and absence of problematic outliers. All assumptions were confirmed as satisfied across all ten regression models, justifying the application of simple linear regression. Given the number of inferential tests conducted across the full hypothesis set (24 tests in total), a Bonferroni correction was applied to control for family-wise error rate. The corrected alpha levels were set at $\alpha = 0.005$ for H_1 – H_{10} (10 tests), $\alpha = 0.007$ for H_{11} – H_{17} (7 tests), and $\alpha = 0.007$ for H_{18} – H_{24} (7 tests). The Kruskal–Wallis test was applied to test hypotheses H_{11} – H_{24} , examining statistically significant differences between three age groups (18–29, 30–45, 46+) and four educational levels (secondary school, Bachelor’s, Master’s, PhD) across all seven measured constructs. This non-parametric test was selected as a methodologically appropriate alternative to one-way ANOVA given the ordinal nature of the independent variables and the distribution of the data.

3. Results

3.1. Descriptive Statistics

The final sample comprised 250 respondents from four MENA countries. Detailed demographic characteristics of the sample are presented in Table 1.

Table 1. Demographic characteristics of the sample ($N = 250$).

Variable	Category	<i>n</i>	%
Gender	Female	125	50.0
	Male	125	50.0
Age	18–29 years	84	33.6
	30–45 years	83	33.2
	46+ years	83	33.2
Country	Egypt	63	25.2
	Jordan	63	25.2
	Kuwait	62	24.8
	Tunisia	62	24.8
Education	Secondary school	62	24.8
	Bachelor’s degree	63	25.2
	Master’s degree	63	25.2
	PhD	62	24.8
Employment status	Employed	142	56.8
	Self-employed	55	22.0
	Student	53	21.2
Dominant platform	WhatsApp	103	41.2
	Instagram	72	28.8
	Telegram	42	16.8
	TikTok	33	13.2
Most effective channel	Facebook	86	34.4
	Official government	85	34.0
	Platform X	79	31.6

The sample was characterized by a notably balanced demographic distribution across all key variables, with gender, age groups, country representation, and educational levels all showing near-equal proportions. This balance was achieved through purposive sampling and enhances the comparability of subgroup analyses conducted in subsequent sections. Regarding digital platform use, WhatsApp emerged as the dominant platform (41.2%), consistent with its established prevalence in MENA digital communication ecosystems. Facebook was most frequently identified as the most effective channel for government–citizen communication (34.4%), followed closely by official government websites (34.0%) and platform X (31.6%), suggesting the absence of a clear consensus on optimal digital channels for governmental communication in the region.

3.2. Reliability Analysis

The internal consistency of all seven scales was assessed using Cronbach's Alpha coefficient on the main sample data ($N = 250$). All scales demonstrated high internal consistency, with values ranging from 0.865 to 0.969, well above the minimum acceptability threshold of 0.70. Detailed reliability statistics are presented in Table 2.

Table 2. Cronbach's Alpha coefficients for all scales ($N = 250$).

Scale	Number of Items	Cronbach's Alpha
Social media use	9	0.963
Institutional trust	6	0.934
Trust in media and digital sources	6	0.865
Political narratives	8	0.962
Digital diplomacy	8	0.950
Security and disinformation	8	0.966
Media literacy	8	0.969

These results confirm that all seven scales possess high psychometric quality and are suitable for subsequent statistical analyses. The values obtained from the main sample are consistent with those obtained in the pilot study, supporting the instrument's stability across samples.

Given the theoretically heterogeneous composition of trust in media and digital sources scale—which aggregates trust across state media, independent media, international media, social media platforms, and official government accounts—additional psychometric analyses were conducted to assess whether the scale measures a coherent underlying construct or masks divergent source-specific patterns. Inter-item correlations for the six items of this scale were all positive, ranging from 0.316 to 0.648, indicating that items share a common underlying dimension despite measuring trust in different source types. Overall, Cronbach's Alpha of 0.865 confirms adequate internal consistency. Sub-scale analyses further revealed acceptable reliability across theoretically meaningful groupings: state and institutional sources (items 24 and 28, $\alpha = 0.755$), independent and international sources (items 25 and 26, $\alpha = 0.773$), and social media and digital sources (items 27 and 29, $\alpha = 0.787$). These results suggest that while the scale captures a general disposition of trust toward media and digital sources, subdimensions corresponding to different source types are present within the broader construct.

3.3. Exploratory Factor Analysis

Prior to factor extraction, the suitability of the data for Exploratory Factor Analysis (EFA) was confirmed through the Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy ($KMO = 0.977$) and Bartlett's Test of Sphericity ($\chi^2 = 14,282.090$, $df = 1378$, $p < 0.001$), both indicating that the correlation matrix was appropriate for factor analysis.

EFA was conducted using Principal Axis Factoring with Promax rotation. Seven factors were extracted based on the Kaiser–Guttman criterion (eigenvalue > 1), collectively explaining 78.134% of the total variance. The first factor accounted for 54.420% of the variance, while the remaining six factors each were between 1.929% and 6.979%. Detailed results of the total variance explained are presented in Table 3. Only initial eigenvalues are reported, as rotation sums of squared loadings cannot be meaningfully summed when factors are correlated, as is the case with Promax (oblique) rotation.

The rotated pattern matrix confirmed the theoretically proposed seven-factor structure of the instrument. All items loaded on their intended factors, with factor loadings ranging from approximately 0.49 to 0.87, and no significant cross-loadings were observed. Items measuring political narratives (Section 4) loaded on Factor 1; trust in media and

digital sources (Section 3B) on Factor 2; media literacy (Section 7) on Factor 3; digital diplomacy (Section 5) on Factor 4; social media use (Section 2) on Factor 5; institutional trust (Section 3A) on Factor 6; and security and disinformation (Section 6) on Factor 7. These results provide empirical support for the construct validity of the instrument. To assess the potential presence of common-method variance, Harman's single-factor test was conducted using Principal Component Analysis with a fixed extraction of one factor. The single factor accounted for 54.42% of the total variance—slightly above the commonly used threshold of 50%. While this result warrants some caution in interpreting the findings, the EFA results confirm that the data are not unidimensional: seven interpretable factors were extracted, collectively explaining 78.134% of total variance, with all items loading on their theoretically intended factors and no significant cross-loadings observed. This seven-factor structure indicates that, although a general response tendency cannot be entirely excluded, the variance in the data is not attributable to a single methodological source. The possibility of common-method bias is therefore acknowledged as a limitation, but the multi-factor structure of the instrument argues against a single-factor interpretation of the data.

Table 3. Total variance explained.

Factor	Initial Eigenvalue	% of Variance	Cumulative %
1	28.843	54.420	54.420
2	3.699	6.979	61.399
3	3.068	5.788	67.188
4	2.132	4.022	71.210
5	1.447	2.729	73.940
6	1.200	2.265	76.205
7	1.022	1.929	78.134

3.4. Simple Linear Regression (H_1 – H_{10})

Prior to conducting simple linear regression analyses, all required assumptions were verified and confirmed as satisfied: independence of residuals (Durbin–Watson statistic), linearity and homoscedasticity (scatterplot analysis), normality of residuals (histogram and Q-Q plot), and absence of problematic outliers. Ten simple linear regression analyses were conducted—five with social media use (D2) as the predictor and five with media literacy (D8) as the predictor. The results are summarized in Table 4.

Table 4. Results of simple linear regression analyses (H_1 – H_{10}).

Hypothesis	Predictor → Outcome	ANOVA	R ²	β	p	95% CI	Result
H ₁	Social media use → Institutional trust	$p < 0.001$	0.562	−0.750	<0.001	[−0.799, −0.640]	Supported
H ₂	Social media use → Trust in media and digital sources	$p = 0.206$	0.006	0.080	0.206	[−0.036, 0.168]	Not supported
H ₃	Social media use → Political narratives	$p < 0.001$	0.634	0.796	<0.001	[0.706, 0.855]	Supported
H ₄	Social media use → Digital diplomacy	$p < 0.001$	0.463	0.681	<0.001	[0.556, 0.730]	Supported
H ₅	Social media use → Security and disinformation	$p < 0.001$	0.652	0.808	<0.001	[0.757, 0.910]	Supported
H ₆	Media literacy → Institutional trust	$p < 0.001$	0.359	−0.599	<0.001	[−0.608, −0.434]	Supported
H ₇	Media literacy → Trust in media and digital sources	$p = 0.039$	0.017	0.130	0.039	[0.005, 0.189]	Not supported *
H ₈	Media literacy → Political narratives	$p < 0.001$	0.474	0.688	<0.001	[0.531, 0.692]	Supported
H ₉	Media literacy → Digital diplomacy	$p < 0.001$	0.429	0.655	<0.001	[0.480, 0.642]	Supported
H ₁₀	Media literacy → Security and disinformation	$p < 0.001$	0.521	0.722	<0.001	[0.594, 0.756]	Supported

ANOVA = analysis of variance; R² = coefficient of determination; β = standardized regression coefficient; 95% CI = 95% confidence interval for β. * H7 was statistically significant at the uncorrected $\alpha = 0.05$ level ($p = 0.039$) but did not survive Bonferroni correction (corrected $\alpha = 0.005$). Given the negligibly small effect size ($R^2 = 0.017$) and failure to meet the corrected significance threshold, H7 is classified as not supported.

Social media use emerged as a strong negative predictor of institutional trust ($\beta = -0.750$, $R^2 = 0.562$, $p < 0.001$), indicating that more intensive social media use is associated with lower levels of institutional trust. This association, however, should be

interpreted within the bounds of the internet-active population surveyed, and caution is warranted in generalizing this finding to the broader population. Social media use was not a statistically significant predictor of trust in media and digital sources ($\beta = 0.080$, $R^2 = 0.006$, $p = 0.206$), with the predictor explaining less than 1% of variance in the outcome variable. In contrast, social media use was a strong positive predictor of attitudes toward political narratives ($\beta = 0.796$, $R^2 = 0.634$, $p < 0.001$), digital diplomacy ($\beta = 0.681$, $R^2 = 0.463$, $p < 0.001$), and security and disinformation perceptions ($\beta = 0.808$, $R^2 = 0.652$, $p < 0.001$).

Media literacy similarly emerged as a strong negative predictor of institutional trust ($\beta = -0.599$, $R^2 = 0.359$, $p < 0.001$), and as a positive predictor of attitudes toward political narratives ($\beta = 0.688$, $R^2 = 0.474$, $p < 0.001$), digital diplomacy ($\beta = 0.655$, $R^2 = 0.429$, $p < 0.001$), and security and disinformation perceptions ($\beta = 0.722$, $R^2 = 0.521$, $p < 0.001$). Media literacy showed a statistically significant effect on trust in media and digital sources at the uncorrected significance level ($\beta = 0.130$, $R^2 = 0.017$, $p = 0.039$, 95% CI [0.005, 0.189]); however, this association did not survive Bonferroni correction (corrected $\alpha = 0.005$) and the effect size was negligibly small. Accordingly, H_7 is classified as not supported following correction for multiple comparisons. To further support interpretation of non-significant findings, 95% confidence intervals were computed for all regression coefficients. For H_2 (social media use $\rightarrow$ trust in media and digital sources), the confidence interval [−0.036, 0.168] includes zero, confirming a genuine null association. For H_7 (media literacy $\rightarrow$ trust in media and digital sources), the confidence interval [0.005, 0.189] is entirely above zero but extremely narrow and close to zero, consistent with the negligibly small effect size and failure to survive Bonferroni correction.

3.5. Kruskal–Wallis Tests (H_{11} – H_{24})

The Kruskal–Wallis test was applied to examine statistically significant differences between age groups (H_{11} – H_{17}) and educational levels (H_{18} – H_{24}) across all seven measured constructs. The results are presented in Tables 5 and 6.

Table 5. Kruskal–Wallis test results—age groups as independent variable (H_{11} – H_{17}).

Hypothesis	Outcome	18–29 MR	30–45 MR	46+ MR	χ^2	df	p	η^2	Result
H_{11}	Social media use	179.80	127.66	68.39	99.321	2	<0.001	0.397	Supported
H_{12}	Institutional trust	68.72	121.18	187.28	112.943	2	<0.001	0.451	Supported
H_{13}	Trust in media and digital sources	132.58	116.37	127.46	2.194	2	0.334	0.009	Not supported
H_{14}	Political narratives	176.52	136.40	62.97	105.895	2	<0.001	0.423	Supported
H_{15}	Digital diplomacy	167.91	131.04	77.04	66.744	2	<0.001	0.267	Supported
H_{16}	Security and disinformation	181.26	131.20	63.37	111.887	2	<0.001	0.447	Supported
H_{17}	Media Literacy	152.98	127.13	96.06	25.960	2	<0.001	0.104	Supported

$\eta^2 = \chi^2 / (\chi^2 + N - 1)$, where $N = 250$. Values of 0.01, 0.06, and 0.14 represent small, medium, and large effects, respectively.

Table 6. Kruskal–Wallis test results—educational level as independent variable (H_{18} – H_{24}).

Hypothesis	Outcome	Secondary MR	Bachelor MR	Master MR	PhD MR	χ^2	df	p	η^2	Result
H_{18}	Social media use	90.80	115.85	149.71	145.41	27.187	3	<0.001	0.109	Supported
H_{19}	Institutional trust	166.50	134.09	100.79	100.88	35.445	3	<0.001	0.142	Supported
H_{20}	Trust in media and digital sources	112.61	122.59	133.58	133.14	3.560	3	0.313	0.014	Not supported
H_{21}	Political narratives	75.40	111.77	148.21	166.48	58.239	3	<0.001	0.233	Supported
H_{22}	Digital diplomacy	76.06	108.40	146.49	170.99	62.434	3	<0.001	0.250	Supported
H_{23}	Security and disinformation	73.20	110.79	146.75	171.16	65.282	3	<0.001	0.261	Supported
H_{24}	Media Literacy	46.25	92.69	157.63	205.44	175.874	3	<0.001	0.703	Supported

$\eta^2 = \chi^2 / (\chi^2 + N - 1)$, where $N = 250$. Values of 0.01, 0.06, and 0.14 represent small, medium, and large effects, respectively.

Effect sizes were computed for all Kruskal–Wallis tests using eta squared ($\eta^2 = \chi^2 / (\chi^2 + N - 1)$). For non-significant comparisons, H_{13} (trust in media and digital sources by age)

yielded $\eta^2 = 0.009$, and H_{20} (trust in media and digital sources by education) yielded $\eta^2 = 0.014$, both indicating negligibly small effects and confirming these as genuine null findings rather than underpowered tests.

Regarding age group differences, statistically significant differences were found for six of seven constructs. The only exception was trust in media and digital sources (H_{13} , $\chi^2 = 2.194$, $p = 0.334$). Younger respondents (18–29) consistently recorded the highest mean ranks for social media use, political narratives, digital diplomacy, security and disinformation perceptions, and media literacy, while older respondents (46+) recorded the highest mean rank for institutional trust, indicating an inverse generational pattern between digital engagement and institutional trust.

Regarding educational level differences, statistically significant differences were found for six of seven constructs, with trust in media and digital sources again representing the only exception (H_{20} , $\chi^2 = 3.560$, $p = 0.313$). Higher educational levels were consistently associated with higher mean ranks for social media use, political narratives, digital diplomacy, security and disinformation perceptions, and media literacy. An inverse pattern was observed for institutional trust, where respondents with secondary school education recorded the highest mean rank (MR = 166.50), while respondents with Master's and PhD degrees recorded the lowest values (MR = 100.79 and MR = 100.88, respectively). The strongest educational differentiation was observed for media literacy ($\chi^2 = 175.874$, $p < 0.001$), representing the most powerful statistical effect documented in the entire study.

4. Discussion

4.1. Social Media Use and Media Literacy as Predictors

The findings of this study reveal a consistent and theoretically coherent pattern: both social media use and media literacy show strong and consistent associations with citizens' digital attitudes in the MENA region, with one striking exception. Social media use emerged as a strong negative predictor of institutional trust ($\beta = -0.750$, $R^2 = 0.562$), while media literacy showed a parallel, though somewhat weaker, negative effect ($\beta = -0.599$, $R^2 = 0.359$). This finding is consistent with recent evidence from comparable political contexts. In a study of social media engagement across hybrid and authoritarian regimes in Southeast Asia, Parr (2025) similarly found that online political expression was associated with significantly lower trust in political institutions, although general social media use alone showed no significant effect—suggesting that the expressive and evaluative dimensions of digital engagement, rather than passive use, may be the primary mechanisms driving institutional distrust. Given that our social media use scale captures active, behaviorally oriented engagement—including expressing opinions and sharing political content—rather than passive consumption, this may help explain the considerably stronger effect observed in our MENA sample compared to studies focused on general platform use alone.

This pattern also aligns with the broader literature on media trust in authoritarian and hybrid media systems. Scholars studying trust formation in non-Western political contexts have noted that the mechanisms underlying institutional skepticism may differ substantially from those documented in Western liberal democracies, where institutions generally enjoy greater baseline legitimacy and accountability. In the MENA context, where governments have historically used both traditional and digital media as instruments of narrative control, citizens who are more digitally engaged and more media literate may be better equipped to recognize state-aligned messaging—a recognition that appears to translate into measurable institutional skepticism rather than differentiated trust.

Both predictors showed strong positive associations with awareness of political narratives, attitudes toward digital diplomacy, and security and disinformation perceptions. Media literacy explained slightly less variance across all three constructs than social media

use, suggesting that direct exposure to digital content—rather than the analytical competency to evaluate it—may be the more proximate driver of citizens' awareness and concern regarding these phenomena. The especially strong effect of media literacy on security and disinformation perceptions ($\beta = 0.722$, $R^2 = 0.521$) is consistent with the protective and sensitizing function of media literacy competencies emphasized in UNESCO's Media and Information Literacy (MIL) framework. This framework positions critical evaluation skills as a key defense against the proliferation of disinformation and harmful digital content. Notably, Jordan—one of the four countries examined in this study—has recently reaffirmed its national commitment to this framework. UNESCO is currently supporting the development of Jordan's second National Media and Information Literacy Strategy for 2025–2028, reflecting growing regional policy recognition of media literacy as a structural priority rather than an individual competency alone (UNESCO, 2025).

The strong positive association between digital engagement and security and disinformation perceptions (H_5 , H_{10}) is consistent with recent regional evidence on the political dynamics of online engagement. Rahbarqazi and Sadeghi Naghdali (2025), drawing on World Values Survey data from Iran, found that online political engagement was associated with both declining institutional trust and heightened security threat perceptions. This relationship was partially mediated by political distrust itself. The authors attribute this pattern to mechanisms such as filter bubbles, echo chambers, and computational propaganda. These mechanisms amplify emotionally charged and critical content among politically engaged social media users—dynamics that are particularly pronounced in media environments where traditional outlets face significant restrictions, as is the case across much of the MENA region. This parallel finding from a neighboring authoritarian context lends further support to the interpretation that heightened security and disinformation awareness among more digitally engaged MENA citizens reflects genuine exposure to politically salient online content, rather than a methodological artifact of the measurement instrument.

The single notable exception to this otherwise consistent pattern concerns trust in media and digital sources, which showed no meaningful association with either predictor (social media use: $R^2 = 0.006$; media literacy: $R^2 = 0.017$, with a negligible effect size despite statistical significance). This finding, and its theoretical implications, is examined in detail in Section 4.3.

4.2. Generational and Educational Differences

The results reveal striking and theoretically coherent patterns of generational and educational differentiation across nearly all seven measured constructs. Younger respondents (18–29) and more educated respondents consistently reported more intensive social media use, greater awareness of political narratives, stronger recognition of digital diplomacy, and heightened perceptions of security and disinformation threats, while older and less educated respondents reported higher institutional trust. The only constructs showing no significant generational or educational differentiation were, once again, trust in media and digital sources (H_{13} , H_{20}).

The most striking finding across the entire study was the exceptionally strong educational differentiation in media literacy ($\chi^2 = 175.874$), nearly seven times larger than the corresponding generational effect ($\chi^2 = 25.960$). This substantial gap suggests that formal education, rather than generational exposure to digital technologies alone, is the primary mechanism through which media literacy competencies are developed. This finding challenges the popular “digital natives” assumption that younger generations are inherently more media literate by virtue of having grown up with digital technologies; rather, it suggests that structured educational experiences play a more decisive role than mere generational membership in cultivating critical evaluation skills.

The inverse relationship between education and institutional trust observed in this study (H_{19} : secondary school MR = 166.50 vs. PhD MR = 100.88) is consistent with [Welzel and Inglehart's \(2006\)](#) theory of emancipative values, which posits that higher education fosters more critical, less deferential orientations toward authority and traditional institutions. According to this framework, education cultivates analytical capacities that enable citizens to evaluate institutional performance against normative standards, fostering skepticism particularly in contexts where institutions exhibit limited accountability and transparency—conditions that characterize much of the MENA region. The convergence of this educational pattern with the generational pattern (younger respondents also reporting lower institutional trust) suggests a compounding effect: younger, more educated citizens—who are simultaneously the most digitally engaged segment of the population—represent the demographic group most critical of state institutions, with important implications for the long-term trajectory of institutional legitimacy in the region.

4.3. Trust in Media and Digital Sources as a Distinct Construct

The most theoretically significant finding of this study is the consistent absence of statistically meaningful associations between trust in media and digital sources and every predictor and demographic variable examined. Neither social media use ($R^2 = 0.006$), media literacy ($R^2 = 0.017$, negligible effect despite significance), age ($\chi^2 = 2.194$, $p = 0.334$), nor educational level ($\chi^2 = 3.560$, $p = 0.313$) showed a meaningful relationship with this construct. This pattern, replicated across four independent statistical analyses, stands in sharp contrast to the strong and consistent effects observed for all other constructs in this study, suggesting that trust in media and digital sources operates according to a fundamentally different logic than institutional trust, political narrative awareness, digital diplomacy attitudes, or security perceptions.

This finding gains theoretical traction when situated within recent scholarship questioning the largely Western-centric assumptions underlying media trust research. [Garusi et al. \(2025\)](#) argue that media trust scholarship has traditionally been rooted in normative expectations derived from democratic journalism, which may fail to capture the differing motivations behind trust decisions across diverse political systems. Within authoritarian and hybrid regimes specifically, media trust appears to be shaped less by individual evaluative competencies and more by citizens' broader typifications of what media institutions are understood to do within a given political order. [Chang and Tang's \(2023\)](#) cross-national analysis of media trust in East and Southeast Asia provides striking empirical support for this argument: in countries characterized by limited press freedom, individuals who recognize and accept news media's role in supporting state censorship and socio-ideological control report the highest, not lowest, levels of media trust—a finding that inverts conventional Western assumptions linking media literacy or critical engagement to differentiated, more discerning trust.

This perspective offers a compelling explanation for why neither media literacy nor social media use predicted trust in media and digital sources in our MENA sample. If trust in this domain is primarily structured by citizens' broader understanding of the media's political function—rather than by their individual capacity to evaluate specific sources—then individual-level competencies such as media literacy would be expected to show limited explanatory power, regardless of how sophisticated those competencies are. This interpretation is further reinforced by the psychometric properties of our trust in media and digital sources scale. Inter-item correlation analysis revealed that all six items share positive correlations ranging from 0.316 to 0.648, indicating a coherent underlying construct rather than a collection of unrelated items. Sub-scale analyses confirmed acceptable reliability across three theoretically meaningful groupings: state and institutional

sources ($\alpha = 0.755$), independent and international sources ($\alpha = 0.773$), and social media and digital sources ($\alpha = 0.787$). These results suggest that the null finding is not primarily attributable to aggregation noise—the items do measure a shared construct—but rather that this shared construct, general trust in media and digital sources, does not respond to individual-level predictors or demographic variables regardless of how it is operationalized. At the same time, the sub-scale analyses reveal that respondents do differentiate between source types to some degree: trust in state media shows a stronger correlation with trust in official government accounts ($r = 0.608$) than with trust in independent or international media ($r = 0.333$ and $r = 0.398$, respectively). This pattern is consistent with Chang and Tang's (2023) finding that in contexts with limited press freedom, state-aligned and independent media occupy fundamentally different positions in citizens' credibility landscapes. Future research disaggregating this construct into source-specific trust measures would enable more precise testing of whether the structural null finding holds equally across all source types or whether it masks divergent patterns at the sub-scale level. A respondent's trust in state media may be shaped by entirely different considerations than their trust in international outlets or peer-shared social media content, and these divergent evaluations may offset one another when aggregated into a single composite score, masking patterns that might be detectable were each source type analyzed independently.

Taken together, these findings suggest that trust in media and digital sources in the MENA region functions less as an individual disposition shaped by competency or behavior, and more as a structural phenomenon rooted in citizens' collective understanding of the media's relationship to political power. This interpretation aligns with the broader pattern observed throughout this study: while social media use and media literacy robustly predict citizens' awareness and evaluative attitudes toward political narratives, digital diplomacy, and security threats, they are insufficient to account for trust in the media ecosystem itself—a construct that may be more deeply embedded in the structural and historical relationship between media and state authority in the region than in any individual's digital habits or competencies.

4.4. Theoretical and Practical Implications

The findings of this study carry several important theoretical and practical implications for understanding digital communication, institutional legitimacy, and media education policy in the MENA region.

This study extends theoretical frameworks developed predominantly in Western liberal democratic contexts to the hybrid and authoritarian political systems that characterize much of the MENA region. The consistent negative relationship between digital engagement—whether through social media use or media literacy—and institutional trust supports the broader argument that digital platforms function as mechanisms of critical exposure in contexts where institutions have historically relied on controlled information environments. This finding extends Welzel and Inglehart's (2006) theory of emancipative values into the digital domain, suggesting that digital engagement may operate as an additional pathway through which citizens develop critical orientations toward political authority, alongside the educational and generational mechanisms originally proposed in the theory. Similarly, the parallel finding from Parr's (2025) study of Southeast Asian hybrid regimes—where expressive political engagement on social media, rather than passive use, predicted institutional distrust—reinforces the conclusion that the behavioral quality of digital engagement, not mere access or exposure, is the critical mechanism linking digital platforms to institutional skepticism in non-Western political contexts. The study's most theoretically generative contribution, however, concerns the structural nature of media trust. By demonstrating that trust in media and digital sources resists explanation by any

individual-level predictor while institutional trust, political narrative awareness, and security perceptions are all strongly and consistently predicted, this study provides empirical support for the argument advanced by [Garusi et al. \(2025\)](#) and [Chang and Tang \(2023\)](#) that media trust research requires conceptual frameworks attentive to the specific political and historical conditions of non-Western media systems, rather than frameworks that assume the universality of individual evaluative competencies as drivers of differentiated trust.

For media education policymakers in the MENA region, the most actionable finding is the overwhelming role of formal education, rather than generational membership, in shaping media literacy competencies ($\chi^2 = 175.874$ for education versus $\chi^2 = 25.960$ for age). First, this finding indicates that media literacy initiatives should be systematically integrated into formal educational curricula at all levels. Second, it cautions against relying on informal digital exposure or generational assumptions about “digital nativeness” to cultivate critical evaluation skills. Third, particular attention should be directed toward less educated populations who, according to our findings, are simultaneously the least media literate and the least aware of digital security threats. The recent commitment by the Jordanian government, in partnership with UNESCO, to a National Media and Information Literacy Strategy for 2025–2028 represents exactly this kind of structural, education-based policy response, and the findings of this study provide empirical justification for similar initiatives across the region. For digital diplomacy practitioners, the findings suggest a need to reconsider target audience assumptions. Awareness and positive evaluation of digital diplomacy were most strongly concentrated among younger, more educated, and more digitally engaged citizens—the same demographic segment that exhibits the lowest institutional trust. This creates a structural tension: the audiences most receptive to digital diplomatic messaging are also the audiences most likely to scrutinize and critically evaluate that messaging. This tension is illuminated by [Vincent et al. \(2026\)](#), whose survey of social media users exposed to Chinese digital diplomacy in Africa found that exposure positively shaped audience perceptions and engagement. Importantly, educational attainment directly influences these outcomes—suggesting that more educated audiences are simultaneously more reachable through digital diplomacy and more discerning in their interpretation of it. In contrast to promotional approaches, effective digital diplomacy strategies in the MENA region may therefore need to prioritize transparency and substantive engagement, particularly when targeting digitally literate and critically engaged segments of the population. For institutions seeking to build digital trust and legitimacy, the consistent negative association between digital engagement and institutional trust carries an important implication: increased digital presence alone is unlikely to rebuild institutional confidence. In some cases, it may reinforce skepticism if not accompanied by substantive changes in transparency and accountability. This concern is reinforced by [Shin et al.’s \(2024\)](#) systematic analysis of digital citizen participation tools. Their findings show that while such tools effectively channel information from citizens to governments, they consistently underperform in distributing accountability information back to citizens—a one-directional pattern that may help explain why greater digital engagement does not translate into greater institutional trust. Conversely, the structural and seemingly intractable nature of media trust—which did not respond to any individual-level predictor examined in this study—suggests that rebuilding trust in media institutions may require a fundamentally different approach. Rather than individual-focused interventions such as media literacy training alone, systemic interventions targeting the broader media ecosystem appear necessary. These include strengthening independent journalism, promoting media pluralism, and establishing genuinely bidirectional channels of government accountability.

4.5. Limitations and Future Research

Several limitations of this study should be acknowledged. First, the cross-sectional design precludes causal inference, and the directionality of the observed relationships cannot be established from the present data. While the theoretical framework and prior longitudinal research support the interpretation that social media use and media literacy shape institutional trust and related attitudes, the reverse direction—whereby pre-existing institutional skepticism leads citizens to seek out more critical or more intensive social media engagement—cannot be ruled out. This limitation is particularly consequential given the strong framing of the Discussion around predictive and explanatory mechanisms: the associations reported here are correlational in nature, and language such as ‘predicts’ or ‘shapes’ should be understood as reflecting theoretical directionality rather than empirically established causation. Future research employing longitudinal or experimental designs would help clarify the directionality of these relationships and enable stronger causal inference.

Second, the sampling design of this study carries important limitations for both external and internal validity. The combination of purposive and snowball sampling distributed through online networks necessarily restricts the sample to internet-active populations, systematically excluding non-users and digitally marginalized citizens. This restriction is particularly consequential given that social media use is the central predictor variable in the study: by sampling exclusively from internet-active individuals, the study cannot capture the full distribution of social media use in the broader population, and the associations estimated—including the strong negative relationship between social media use and institutional trust ($\beta = -0.750$)—should be interpreted as relationships within the internet-active population rather than as population-level effects. The deliberately balanced demographic distribution across gender, age, education, and country, while enhancing the comparability of subgroup analyses, further limits the representativeness of the sample and precludes population-level generalization. Future studies employing probability-based sampling methods that include non-internet users would substantially strengthen the external validity and internal validity of these findings.

Third, the composite measurement of trust in media and digital sources, which aggregated trust across state media, independent media, international media, and social media platforms into a single scale, may have obscured more nuanced patterns. As discussed in Section 4.3, these source types occupy markedly different positions within MENA media and credibility landscapes, and future research disaggregating this construct into source-specific trust measures may reveal significant predictors that were masked in the present aggregated analysis.

Fourth, all measures in this study relied on self-reported attitudes and perceptions rather than observed behavior, which introduces the risk of social desirability bias—particularly given the politically sensitive nature of several constructs examined, including institutional trust and security threat perceptions. Although respondents were guaranteed full anonymity, the possibility of response bias in politically sensitive contexts cannot be entirely excluded. The present study did not employ procedural remedies specifically designed to reduce social desirability bias, such as list experiments, indirect questioning techniques, or randomized response methods, which would have provided stronger protection against this threat to internal validity. Future research examining politically sensitive attitudes in authoritarian and hybrid political contexts should consider incorporating such techniques, particularly when measuring institutional trust and security perceptions where respondents may be reluctant to express critical views even under conditions of anonymity.

Additionally, the use of a single self-report instrument for measuring both predictor and outcome variables introduces the possibility of common-method variance. Harman's single-factor test revealed that the first unrotated factor accounts for 54.42% of total variance, slightly exceeding the 50% threshold commonly used as an indicator of problematic common-method bias. A further statistical limitation concerns the specification of the regression models used to test H_1 – H_{10} . Ten separate simple linear regression analyses were conducted—five with social media use and five with media literacy as the predictor—rather than a multiple regression framework that would simultaneously control both predictors. This approach, while appropriate for testing the specific directional hypotheses formulated in this study, does not account for the potential mutual confounding of the two predictor variables, and the reported associations should therefore be interpreted as bivariate rather than independent effects. A multiple regression or structural equation modeling framework controlling for both predictors and demographic variables simultaneously would provide stronger evidence for the inferential claims advanced. Additionally, although a Bonferroni correction was applied to control family-wise error across the 24 inferential tests, this conservative approach may increase the risk of Type II errors failing to detect effects that genuinely exist. Future research should consider pre-registered corrections for multiple comparisons to balance Type I and Type II error rates more optimally. Future research would benefit from incorporating procedural remedies such as temporal separation between predictor and outcome measurement, or the use of multiple data sources, to more effectively control for this potential source of bias.

Finally, this study focused on four MENA countries selected for their geographic and political diversity, but the aggregation of data across these four countries masks potentially important intra-regime differences. Egypt, Jordan, Tunisia, and Kuwait represent markedly different political configurations—Gulf monarchy, Levantine constitutional monarchy, post-revolutionary transitional system, and consolidated Arab republic—and the patterns observed at the aggregate level may not hold equally across all four contexts. Country fixed-effects or stratified models would have provided more defensible evidence of cross-national generalizability, and the absence of country-level disaggregation is a limitation that future research should address. Future comparative research extending this model to additional MENA countries, as well as cross-regional comparisons with other hybrid and authoritarian contexts, would help determine the extent to which the patterns identified here generalize beyond the specific countries examined. Future research might also usefully disaggregate the social media use construct to examine whether passive consumption and active political expression online, as distinguished by Parr (2025), exert differential effects on institutional trust within the MENA context specifically. Further limitations concern the operationalization of media literacy. As noted in Section 2.3, all items in the media literacy scale rely on self-reported behavioral intentions and perceived competencies. Jones-Jang et al. (2021) demonstrated that self-reported measures of media literacy were not significantly associated with actual fake news identification, whereas objective performance-based measures of information literacy were—raising important questions about the validity of self-report literacy scales more broadly. In the context of the present study, this limitation is particularly relevant when interpreting the strong educational effect on media literacy ($\chi^2 = 175.874$), which may partly reflect higher self-efficacy, self-confidence, and educational identity among more educated respondents—rather than exclusively their verifiable literacy competencies. This means that the study's normative claim that formal education, rather than generational exposure, is the primary driver of media literacy competencies rests on a measure that cannot fully disentangle actual literacy skills from education-related self-confidence and identity and should therefore be interpreted with appropriate caution. Future research would benefit from incorporating

brief skills-based performance measures alongside self-report scales to enable more precise estimation of actual media literacy competencies in the MENA context.

Additionally, while the construct validity of the instrument is supported by expert validation, EFA-confirmed factor structure, and high internal consistency across all scales, the study did not employ confirmatory factor analysis (CFA) on an independent subsample, which would provide stronger evidence of measurement model fit. Future research replicating this instrument should consider CFA as a standard validation step, particularly for the more complex attitudinal constructs—political narratives, digital diplomacy, and security and disinformation—where the multidimensionality of the underlying phenomenon may not be fully captured by a single latent factor.

5. Conclusions

This study examined the relationships between social media use, media literacy, and citizens' digital attitudes across four MENA countries—Egypt, Jordan, Tunisia, and Kuwait—testing a comprehensive model of 24 hypotheses spanning institutional trust, trust in media and digital sources, political narratives, digital diplomacy, and security and disinformation perceptions, alongside generational and educational differences across all constructs. Drawing on a quantitative cross-sectional design with a validated 53-item instrument administered to 250 respondents, the study confirmed 21 of 24 hypotheses, yielding three central findings.

First, social media use and media literacy show strong and consistent associations with citizens' digital attitudes, operating as a double-edged mechanism: both erode institutional trust while simultaneously heightening awareness of political narratives, digital diplomacy, and security and disinformation threats. Second, generational and educational differences mirror this pattern, with the exceptionally strong educational effect on media literacy ($\chi^2 = 175.874$, far exceeding the generational effect) indicating that formal education, rather than generational exposure to technology, is the primary driver of media literacy competencies. Third, and most theoretically significant, trust in media and digital sources resisted explanation by every individual-level predictor examined—the source of all three unsupported hypotheses (H_2 , H_{13} , H_{20})—suggesting that media trust in the MENA region is governed less by individual competencies and more by citizens' collective understanding of media's relationship to political power.

Taken together, these findings suggest that in hybrid and authoritarian political contexts, digital engagement does not erode or rebuild trust in a uniform or undifferentiated manner—it sharpens citizens' critical capacities toward the state while leaving their relationship to the media ecosystem itself largely untouched by individual competency or behavior. This distinction matters for both theory and practice: it implies that interventions aimed at strengthening institutional legitimacy and interventions aimed at rebuilding media trust may require fundamentally different strategies—the former addressable through transparency and accountability, the latter requiring structural change to the media ecosystem itself.

As with any cross-sectional design, this study has limitations, including reliance on non-probability sampling and an aggregated measurement of media trust across heterogeneous source types, as discussed in Section 4.5. Future research employing longitudinal designs, probability-based sampling, and disaggregated trust measures would help extend these findings. Nonetheless, by jointly examining social media use, media literacy, and citizens' attitudes across multiple political, demographic, and thematic dimensions within an underexplored regional context, this study contributes a comprehensive empirical foundation for understanding the structural determinants of digital attitudes in the MENA region.

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Abbreviations

The following abbreviations are used in this manuscript:

MENA	Middle East and North Africa
EFA	Exploratory Factor Analysis
KMO	Kaiser–Meyer–Olkin
MIL	Media and Information Literacy
MR	Mean Rank
SPSS	Statistical Package for the Social Sciences
UAE	United Arab Emirates

Appendix A

Table A1. Survey questionnaire items by section.

Sex	Female
	Male
Age	18–29 years
	30–45 years
	46+ years
Country	Egypt
	Jordan
	Tunisia
	Kuwait

Table A1. *Cont.*

Education	Secondary school
	Bachelor's degree
	Master's degree
	PhD
Employment status	Employed
	Self-employed
	Pensioner
	Student
	Unemployed
	Housewife
Dominant platform	Second
	Facebook
	Twitter/X
	Instagram
	YouTube
	Telegram
	Snapchat
	TikTok
	Signal
More effective channel	WhatsApp
	Twitter/X
	Facebook
	Instagram
	YouTube
	Telegram
Social media use	Official government Platform
	I use social media every day.
	I spend a significant part of my day on social media.
	I use social media to follow current social and political events.
	I use social media to stay informed about important events and crisis situations.
	I use social media to follow different opinions on current topics.
	I use social media as one of my sources of information about current events.
	I use social media to get quick information about current events.
	I use social media to express opinions on social or political topics.
	I use social media to share content related to current social or political topics.
Trust in institutions	I trust my country's government.
	I trust my country's courts and legal system.
	I trust my country's parliament.
	I trust my country's armed forces.
	I trust that state institutions act in the interest of citizens.
	I trust state institutions when they communicate with citizens.
Trust in media and digital sources	I trust the information published by state media.
	I trust the information published by independent media.
	I trust the information published by international media.
	I trust the information I get through social media.
	I trust the information that comes from official government accounts on social media.
	I believe social media can be a reliable source of information when used critically.

Table A1. Cont.

Political narratives on social media	Social media plays an important role in spreading political narratives.
	Political actors use social media to shape public opinion.
	State institutions use social media to present certain political messages.
	Political content on social media can influence citizens' political attitudes.
	Political narratives on social media can influence how citizens interpret social events.
	Social media enables the rapid spread of political messages and campaigns.
	Political content on social media encourages citizens to take part in political discussions.
	Political narratives on social media can influence citizens' trust in institutions.
Digital diplomacy	Digital diplomacy plays an important role in contemporary international relations.
	Social media enables governments to communicate more effectively with the international public.
	Digital diplomacy can contribute to better understanding between states.
	The presence of governments on social media can increase the transparency of their communication.
	Governments that actively use social media appear more accessible to citizens and the international public.
	Digital diplomacy can help ease international tensions and conflicts.
	Digital diplomacy can contribute to a faster response in international crisis situations.
Security and disinformation	The use of social media in diplomatic communication can improve a country's image in the world.
	Foreign political influence through social media represents a serious threat to national security.
	The spread of disinformation and fake news online represents a serious threat to national security.
	Cyberattacks on state institutions represent a serious threat to national security.
	Recruitment by extremist groups via the internet represents a serious threat to national security.
	Digital surveillance of citizens by foreign actors represents a serious threat to national security.
	The misuse of social media for political manipulation represents a serious threat to national security.
	Disinformation on social media can undermine citizens' trust in institutions.
Media literacy	Fake news on social media can cause social divisions and instability.
	Before sharing a news item on social media, I check the reliability of its source.
	I can assess whether information on social media is reliable.
	When I come across suspicious information on social media, I verify it through other sources.
	I know what steps to take when I come across fake or suspicious news on social media.
	When I come across fake or harmful information on social media, I report it to the platform.
	Before believing political information from social media, I check who its source is.
	I try to distinguish facts from opinions in the information I see on social media.
	I pay attention to who the author or source of information is before accepting it as accurate.

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