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From Motives to Perceived Social Impact: Active and Passive Social Media Use, Digital Literacy, and Neuroticism in Pakistan

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Abstract

When discussing social media, it seems we always end up talking about how much time people spend on it or whether it's a good or bad thing. These narratives fail to address the reasons for using social media, activities during online use, and differences in perceived outcomes as a result of personal resources and vulnerabilities. The dual-pathway model was tested in this study: motivation for social media use was related to positive and negative social impact via active connected and passive comparative use, respectively. The digital literacy and the neuroticism were investigated as possible moderators. The cross-sectional online survey was conducted from 4th May to 21st July 2026, and resulted in 339 full responses from adults in Pakistan who use social media. 43 five-point Likert items were used to measure seven constructs. A hierarchical ordinary least squares regressions adjusted for age, gender, education, daily use time and platform use. The indirect effects were assessed using 5,000 bootstraps resample and the interaction terms tested

moderation. The internal consistency of all the seven scales was excellent (Cronbach's alpha ranged from .806 - .868), except for the scale of motivation, which was not very convergent. The modified positive impact model accounted for 46.3% of the variance. Motivation (B = .507, p < .001), active connected use (B = .245, p < .001), and digital literacy (B = .163, p = .001) were significant positive predictors. The overall model of negative-impacts, modified accounted for 35.4% of the variance and was only significant for neuroticism (B = .473, p < .001) as the predictor. The indirect motivational association to a positive impact was significant and large, with an indirect effect of .080 (95% bootstrap CI [.035, .131]) and was mediated by active use. There was also a strong indirect effect in the specified model for passive use (indirect effect = .112, 95% CI [.049, .183]), but no indirect effect after the inclusion of neuroticism. Both interactions were not significant. Demographic/platform comparisons were not found to survive multiplicity corrections. The results corroborate the activity and person sensitive perspective on social media. The connected participation and digital competence were linked to positive impacts, while negative impacts tended to be more associated with psychological vulnerability than to passive use. The cross-sectional and exploratory measurement design needs to be interpreted with caution, but the results suggest that recommendations that are solely based on screen time or an active-passive dichotomy cannot be made.

Keywords: social media, active use, passive use, digital literacy, neuroticism, social impact, Pakistan, mediation

1. Introduction

Social media is everywhere and it's a part of the everyday conversation. Platforms are used to relate, learn, work, entertain, express identity, seek support, conduct business and in public life. The impacts, however, are not consistent. Comparative experiences can be positive and foster social connection and informational and/or emotional support, or can be negative, with a focus on comparisons, compulsions or negative emotions and can be associated with negative stress, loneliness or poorer well-being. So, recent meta-analyses have focused not on the positive or negative aspects of social media, but on the more relevant question of what types of activities are correlated with positive or negative outcomes for specific types of users, in certain contexts (Godard & Holtzman, 2024; Marciano et al., 2024).

This shift matters in part because it's not a good way to define the social media experience – it's how much time is spent on it. It's possible for two users to spend the same number of hours online, but to be in very different practices. You can share tips, work together, produce material or just passively observe people, or you can scroll to ignore an upsetting scene. The labels of active use and passive use also have similar reviews that indicate that there are no definite psychological effects. Active behavior can be supportive or conflictual, passive behavior can encourage negative comparisons or be used as a teaching tool or for entertainment (Valkenburg et al., 2022; Verduyn et al., 2022). Content and communication partners continue to be key, as do perceived relational closeness and individual susceptibility.

These differences are of a significant nature and can be explored in Pakistan. The country's internet users were forecast to be 117 million and social media user identities 79.9 million by the end of 2025 (Kemp, 2025). Platforms can bring families together despite geographical distance, help children learn and work on platforms and for other companies, and facilitate small businesses to promote themselves on the platform and increase access to civic information. Youth political participation in Pakistan is also related to online social capital (Shahzad & Omar, 2021). In addition, disparities in access and skill, misinformation, privacy concerns, fraud, and harassment, as well as gendered digital abuse, are present in these opportunities (Digital Rights Foundation, 2025). The figures of connectivity do, however, give an indication of scale rather than equality in being able to participate in a digital way, as is evident in the connectivity of aggregate.

The present study works on three gaps. Firstly, the findings from the research related to active and passive use are not local to Pakistan. What is acceptable in a family-oriented environment is different from what is acceptable in a different context and there are language and educational differences, gender expectations/reputations and urban-rural differences that all influence the solutions. The situation could impact on public participation, the type of information they read, and the way information online is interpreted in comparison or feedback.

Second, motivational explanations are rarely linked with concrete pathways of engagement. Theories of ‘uses and gratifications' (U&G) have identified the following motives for platform use as common: connection, information, entertainment, expression, support, convenience and escape (Bhatiasevi, 2024; Falgoust et al., 2022; Romero Saletti et al., 2022). However, a motive does not

dictate a certain behavior. Information searching can result in learning and verification, or even the spread of false or unverifiable information. Reciprocal conversation or monitoring can be triggered by a desire for connection. The relationship between motivation and active and passive involvement can thus account for the translation of the purposes in terms of different experiences.

Third, there are also different resources and vulnerabilities of users in the same technological environment. Social media literacy is a set of competencies that enable assessing credibility, comprehending social media algorithms, verifying information, safeguarding privacy, and responsibly using social media (Heiss et al., 2023; Polanco-Levican & Salvo-Garrido, 2022; Valle et al., 2025). According to the experimental evidences in Pakistan, there exists positive evidences of the usefulness of practical and personalized interventions with regard to improvement of misinformation discernment (Ali & Qazi, 2022, 2023). Neuroticism, on the other hand, can make you more susceptible to uncertainty, rejection, and negative evaluation. The relationship between the two is complex, and meta-analyses of the evidence indicate that, while there is a link between the two, only neuroticism is reliably identified as being linked to problematic use (Bowden-Green et al., 2021; Meynadier et al., 2024).

This background will lead to proposing and validating a two-pathway model. The motivation is considered as a predictor of both active connected use and passive comparative use. The active pathway is reciprocal and participatory use and perceived positive social impact, while the passive pathway is observational and comparison oriented and perceived negative social impact. Digital literacy is assessed as a resource that can enhance the active-positive relationship while neuroticism is assessed as a vulnerability that can enhance the passive-negative relationship. The study provides a more nuanced and differentiated picture of adult perceived social impact in Pakistan by estimating those pathways and controlling for age groups, and time and platforms.

2. Theory and Hypotheses

2.1 Motivation and patterns of engagement

Uses-and-gratifications theory is started by the assumptions that users choose media to meet their needs instead of the media giving him any effects as passive recipients. The purposes of social media are usually summarized as the interconnected need for relational connection, information

seeking, entertainment, self-expression, belonging, support and escape (Bhatiasevi, 2024; Falgoust et al., 2022). Instagram's qualitative studies also reveal the complex nature of motives and use and their potential for different emotional or social effects (Romero Saletti et al., 2022).

Motives can result in overt participation. Users may interact with other users by replying, commenting, sharing content, discussion, or collaborating. Information and identity motives can be used to support content production, question posing and exchange of knowledge. These behaviors represent an active connected use because the characteristic is that they are not just clicking or posting, but rather engaging in an interaction of some sort that builds upon the interaction of others. The first hypothesis is thus:

H1: Motivation for social media use is positively associated with active connected use.

Observation can be used as a means to achieve the same objectives. Users can be informed, observe relationships without posting or responding, find entertainment, compare lifestyles, or deal with boredom without posting or responding. Extended active-passive model challenges the notion of individuals being either active or passive and supports the idea that one and the same individual can be either active or passive at various moments and platforms (Verduyn et al., 2022). Therefore, a large number of motives ought to predict passive comparative use as well:

H5: Motivation for social media use is positively associated with passive comparative use.

2.2 The active connected pathway to positive impact

In this study, active connected use includes commenting, sharing, discussing, content creation, responding and co-constructing. There are a number of ways in which these practices can be positive social impacts. Reciprocal communication can sustain weak and strong ties, create the visibility of support, and facilitate feedback. Sharing Knowledge can unlock learning and experience for users. Talk and working together can increase civic awareness and civic involvement. These mechanisms are similar to the social-capital accounts where networks provide information, a sense of belonging, and access to resources.

There is empirical literature that supports a qualified (not universal) benefit. The associations between active and passive use and mental health, well-being and social support were small and contextually dependent, as revealed by a meta-analysis of 141 studies (Godard & Holtzman, 2024). There were weak positive links between social media and positive well-being in a separate meta-analysis, which also showed high levels of heterogeneity (Marciano et al., 2024). One possible boundary condition is relational closeness: When users feel that the individuals in their feeds are close to them, any negative effects of comparison can be alleviated by support (Han & Yang, 2023). The results suggest that ‘active use' is most likely to be constructive when it is real rather than just ‘on display' or ‘performative'.

The positive-impact construct presented here is perceived relationship-building, connection, knowledge, awareness of social issues, support and well-being. The active-use measure is more of a reciprocal and contributory measure, so a positive association is expected:

H2: Active connected use is positively associated with perceived positive social impact.

Motivation in turn can have an indirect pathway to positive impact through engagement. The user's need for information, connection, belonging, or expression may inspire their involvement, which can provide opportunities to learn, be supportive, collaborate, and foster civic awareness.The indirect route does not mean that there are no other mechanisms of active use. Perceived benefit (direct) may also be a direct link to motivation. There is also the perceived benefit (direct) that may be a direct link to motivation. The model thus predicts partial (not full) mediation:

H3: Active connected use mediates the relationship between motivation and perceived positive social impact.

2.3 Digital Literacy as a Proposed Boundary Condition

Digital literacy is not just technical access. Social media literacy is part of a conceptual study that involves inquiry, reflection, contextual judgment and responsible action (Polanco-Levican & Salvo-Garrido, 2022; Valle et al., 2025). Users need to have the ability to assess the credibility of the content, identify manipulated or fake content, and have awareness of the algorithm's personalization effect on visibility, how to manage their privacy, and the intent behind the post.

Information literacy has further been linked to less overload, news avoidance and conspiracy mentality (Heiss et al., 2023). These abilities come into play when there is a lot of misinformation, not just in people's lives, but also in the communication of the public (Ziapour et al., 2024).

The active-positive pathway might be further reinforced through literacy in a variety of ways. A digitally literate user can recognize credible information, use more responsibly, have personal boundaries and not to propagate misleading information. In turn, involvement can result in more learning, more positive and safe interactions, and more positive civic involvement. Relevant evidence from Pakistan is randomized: Targeted feedback and educational interventions were found to enhance the ability to identify inaccurate from accurate information (Ali & Qazi, 2022, 2023). The use of literacy should be more strongly related to positive outcomes at higher literacy: use connected participation to achieve constructive outcomes:

H4: Digital literacy positively moderates the relationship between active connected use and perceived positive social impact.

2.4 The passive comparative pathway to negative impact

Passive comparative use is defined as scrolling, watching, and browsing to get a glimpse of creation without interacting. Nothing in and of itself is bad or good about passive observation. It can offer diversion, education and healing. The problem with risk is that it may occur when observation is done through an upward comparison, when something is idealized, when there is conflict, or when something is observed repeatedly without support from another person. The content of the feed and meaning given to the feed, therefore, are more important than passive behavior.

The social comparison process is a plausible mechanism. Selected posts typically feature success, looks, money, relationships, travel and popularity. Such content can lead to negative auto-evaluation, especially in the context of an interpretation that is seen as representative and not selective. Evidence at the daily level suggests that the association between social media use and negative well-being is mediated by upward comparison between social media use and self-concept (Irmer & Schmiedek, 2023). The content in the Facebook feed and the comparison processes are also shown to be better indicators of self-esteem than being active-passive in general (Trieu et al.,

2021). During the COVID-19 period, there was also qualitative research which found that increased platform usage has been perceived to cause anxiety, mood and social connection issues (Giancola et al., 2023).

A strong association between problem use and mental-health and social costs has been created with increased intensity. The rollout of Facebook at different campuses in US colleges was linked to lower students' mental health (Braghieri et al., 2022). The results of the current study emphasize the bi-directional nature of the relationship between loneliness and problematic social media use, while the results of the study conducted at the national level in Denmark have shown that social media addiction is associated with poorer mental health outcomes in adulthood and perceived as well as actual loneliness (Wu et al., 2024; Santini et al., 2025). These studies do not conclude that these patterns of participation are the same as addiction or problematic use, but they do suggest that there is a link between the above-described patterns of participation and undesirable outcomes.

The present negative-impact measure includes loneliness, post-use stress, self-comparison, lower self-esteem, feeling overwhelmed and reduced productivity. It is expected that the passive comparative use will be positively correlated with this outcome:

H6: Passive comparative use is positively associated with perceived negative social impact.

Passive comparative behavior can be a negative effect of motivation. Extensions of observation can be stimulated by entertainment motive, monitoring motive and escape motives, and user's evaluation against others can be stimulated by connection motive and identity motive. Stress and diminished self-regard may then occur at the same time on both sides of the comparison or monitoring. Thus:

H7: Passive comparative use mediates the relationship between motivation and perceived negative social impact.

2.5 Neuroticism as a proposed vulnerability

Neuroticism is characterized by being hypersensitive to negative events, emotionally unstable, worrying and being negatively affect. This can lead to ambiguity in online cues being more

threatening and idealized content being more personally consequential to this. The continual checking of these things can keep worry alive, and taking a break from social media to feel better may only take the place of the distressing thoughts. The findings of a systematic review reveals that the connection between neuroticism and using social media is based on the behavior and outcome studied (Bowden-Green et al., 2021). However, according to the results of the meta-analysis, the Big Five personality trait most strongly correlated with problem use of social media seems to be neuroticism (Meynadier et al., 2024).

In Pakistan, there are studies that correlate the personality traits of neuroticism with social media addiction among university students (Dilawar et al., 2022). But other studies indicate that the link between neuroticism and passive use of mobile social networks can be explained by fear of missing out and online social support (Zhang et al., 2023). Neuroticism has also buffered some points on the link between intensity of Facebook use, problematic use and depressive symptoms but not consistently throughout the pathway (Gugushvili et al., 2022). Based on this, it is expected that the relationship between passive comparative use and a negative impact will be stronger when neuroticism is added:

H8: Neuroticism positively moderates the relationship between passive comparative use and perceived negative social impact.

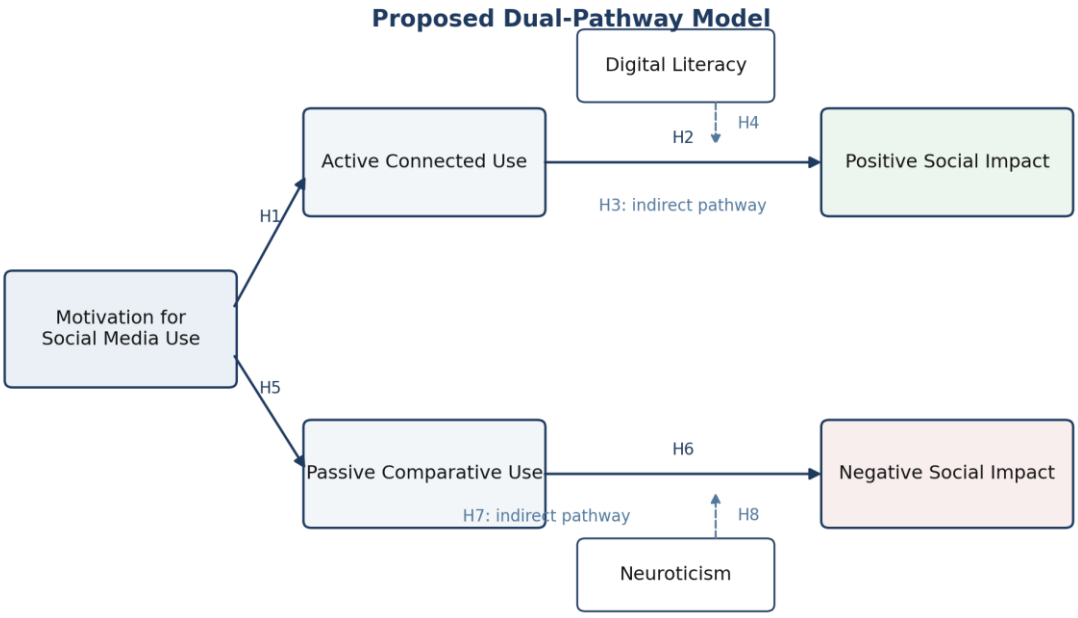


Figure 1: Proposed Dual-Pathway Model of Social Media Use and Perceived Impact

Note. Solid arrows show direct pathway and H3 and H7 are indirect pathway. Moderation tests are proposed by dashed arrows. The diagram is a hypothesis, not actual findings.

3. Methodology

3.1 Design and participants

This study was conducted using quantitative method and cross-sectional approach with online survey. The target population were the adults who use social media in Pakistan and can read the questionnaire and report their own practices on social media platforms. As there was no complete sampling frame of adult social media users, the recruitment method was through convenience and a network-based approach. The survey link was sent out to various demographic, educational and occupational networks.

The data were gathered from 4th May to 21st July 2026. All 339 returned records were complete, in range and unique under timestamp and record level checks of 339 submitted. Everyone answered said that he or she was 18 or older. Sixty-eight percent (68.1%) of the sample was young (18-25 years) and highly engaged with social media, with 54.3% being students, and 71.1% using social media for at least three hours a day. The majority of respondents identified as women

(52.8%), men (46.0%) or neither man nor woman (1.2%). The most popular platforms were WhatsApp, Instagram and YouTube. The main characteristics of the samples are given in Table 1.

Table 1: *Participant and Social Media Use Profile (N = 339)*

Characteristic	Category	n	%
Age	18-25	231	68.1
Age	26-35	59	17.4
Age	36 or older	49	14.5
Gender	Female	179	52.8
Gender	Male	156	46.0
Gender	Prefer not to say	4	1.2
Education	Bachelor's degree	140	41.3
Education	Other education	199	58.7
Daily use	3-4 hours	144	42.5
Daily use	5 or more hours	97	28.6
Platform	WhatsApp	245	72.3
Platform	Instagram	207	61.1
Platform	YouTube	146	43.1

Note. The percentages for platform use were multiple responses and therefore will not add up to 100%. To keep the article table compact, only the rows that were selected were added back to the platform.

3.2 Procedure and ethical safeguards

The survey started with an introduction with consent statement and a study description. There was no requirement that the individual participate, and by submitting, the individual was deemed to be an adult and consenting to participate. The questionnaire asked for no names or personal identifiers. Responses were processed as a whole and timestamps were only added to show when responses were taken and to ensure that any screenshots of responses were samples of the same. If the journal submission is based on an ethics-approval or exemption, it should include the appropriate institutional ethics-approval/exemption reference on the declarations section of the article.

3.3 Measures

A questionnaire included 43 construct items, demographic, and use questions. All construct items were rated by using a five-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). Items were not reverse-coded and a composite score was created by averaging the items across each construct. So, higher scores meant more of the measured attribute and the original metric 1-5 was retained.

The measures were not copied from a proprietary measure, but were developed by the researcher and based on the most recent research in the literature. Motivation comprised of three parts: connection, belonging, information, current events, entertainment, boredom relief, expression, identity and escape (Bhatiasevi, 2024; Falgoust et al., 2022; Romero Saletti et al., 2022). The active and passive items were based on new concepts of participative and observational practices (Valkenburg et al., 2022; Verduyn et al., 2022). The digital literacy included topics on identifying misinformation, evaluating sources, comprehending algorithms, verification, posts' privacy and intentions (Heiss et al., 2023; Valle et al., 2025). Neuroticism is a personality characteristic which includes feelings of anxiety, sensitivity to distress, mood fluctuation, overthinking and stress reactivity.The two outcome measures evaluated different perceived benefits and harms and not different aspects of a single dimension. The content and descriptive statistics and estimates of measurement quality are reported in Table 2.

Table 2: *Measures, Descriptive Statistics, and Measurement Quality*

Construct	Content	k	M (SD)	Alpha	CR	AVE
Motivation (MOT)	Connection, information, entertainment, expression, escape	9	3.39 (.78)	.806	.807	.328
Active use (ACT)	Commenting, sharing, discussion, creation, response, collaboration	6	2.65 (.98)	.838	.839	.468
Passive use (PAS)	Scrolling, watching, browsing, consuming, observing	5	3.34 (.97)	.828	.829	.495
Digital literacy (DL)	Credibility, algorithms, verification, privacy, intent	6	3.50 (.91)	.861	.862	.512
Neuroticism (NEU)	Anxiety, stress, mood shifts, overthinking, reactivity	5	3.27 (1.02)	.868	.868	.570

Construct	Content	k	M (SD)	Alpha	CR	AVE
Positive impact (PSI)	Relationships, connection, knowledge, awareness, support, well-being	6	3.24 (.91)	.858	.859	.507
Negative impact (NSI)	Loneliness, stress, comparison, self-esteem, overload, productivity	6	2.81 (.92)	.841	.844	.482

Note. k = number of items; CR = composite reliability; AVE = average variance extracted. Scores range from 1 to 5. Motivation had weak AVE; ACT, PAS, and NSI were marginally below .50.

3.4 Control variables

Adjusted models were constructed that incorporated both age, gender, education, time spent using social media on a daily basis and eight nonexclusive indicators of social media platforms. The categorical variables were dummy coded with one of the categories as the reference. Occupations were described, but were not entered due to the sparseness in a few categories. The first hierarchical block consisted of the controls; the second block included the focal predictors. In this strategy, the additional variance accounted for by the proposed constructs was evaluated beyond that accounted for by general demographic and usage characteristics.

3.5 Analytical strategy

Data screening was then carried out to examine whether there were any missing data, out-of-range answers, any duplicate timestamps, or duplicate records. Skewness, Kurtosis and Shapiro-Wilk tests were used on the distributions. For moderate-to-large sample sizes, bounded Likert composites are likely to have meaningful formal tests of small deviations, therefore, p values as well as distributional shape and residual diagnostics are considered (Kline, 2023).

Cronbach's alpha and composite reliability were used to assess the internal consistency. The Kaiser-Meyer-Olkin statistic and the Bartlett's test were used for the factorability.A preliminary evaluation of the structure of the seven constructs was made with exploratory principal axis factor analysis, using varimax rotation. The average variance extracted (AVE) represented the convergent validity and the Fornell-Larcker criterion represented the discriminant validity (Hair et al., 2022). The exploratory diagnostics were not considered as substitutes for confirmatory factor analysis.

Bivariate associations were described using Pearson correlations. Hierarchical ordinary least squares regression estimated models including the positive and negative impacts. Variance inflation factors, Breusch-Pagan tests, Durbin-Watson statistics, Cook's distance, standardized residuals and HC3-robust standard errors were among the regression diagnostics. Estimates of the indirect effects were derived by using 5,000 bootstrap resamples and the same demographic, time, and platform controls as in the adjusted regressions. In each instance each mediation model was the specified mediator and not the individual trait variable of the pathway. Component variables were moderated by means of centering. Exploratory gender, age, and platform comparisons were done using Holm adjusted p values for multiplicity adjustment. Alpha = .05 for all hypothesis tests and they were two-tailed.

Common method variance is a design concern since all the focal variables were derived from one questionnaire. The questionnaire divided constructs into sections, utilized neutral instructions and did not include direct identifiers. Harman's first factor percentage was only computed as a descriptive screen as per recent methodological critique of the test (Howard et al., 2024; Podsakoff et al., 2024).

4. Results

4.1 Distribution and measurement quality

All of the composites had an absolute skewness and absolute kurtosis less than 1.0. Although all construct-level Shapiro-Wilk tests were significant, the small distribution deviations on scales limited to five points on either side and checking of the residuals indicated that it was prudent to use the OLS approach. The construction values ranged from 2.65 for active connected use to 3.50 for digital literacy. Though these scores do not measure an actual impact on society, a higher mean positive impact (M = 3.24, SD = .91) than a mean negative impact (M = 2.81, SD = .92) was found.

The Kaiser-Meyer-Olkin value was .896 and the Bartlett's test was significant (chi-square(903) = 8010.17, $p < .001$). There were seven factors that retained, accounting for 61.21% of the variance of the items, but eight Eigen values were above 1. The factor pattern was informative, but not completely “clean,” with intended rotated loadings ranging from .244 to a median of .682 and the

largest cross-loading being .555. The internal consistency was good for the seven composites (alpha = .806-.868; composite reliability = .807-.868).

There was an uneven convergent validity. AVE was greater than .50 for digital literacy, neuroticism, positive impact, and was close to .50 for the passive use and negative impact, while it was low for motivation (AVE = .328). The Fornell-Larcker comparison was also not successful with respect to motivation due to the square root of its AVE (.572) being slightly less than its correlation with positive impact (.587). The motivation composite was included in the planned exploratory analysis but results with the composite should be interpreted with caution and should be replicated in independent studies. Harman's first unrotated factor accounted for 25.02% of variance, as mentioned above this does not preclude common-method bias.

4.2 Bivariate associations

Descriptive statistics and correlations are shown in Table 3. Motivation was associated with both active use ($r = .289$, $p < .001$) and passive use ($r = .448$, $p < .001$). The results indicated active use was correlated with positive impact ($r = .408$, $p < .001$) and passive use correlated with negative impact ($r = .301$, $p < .001$). Negative impact ($r = .554$, $p < .001$) was the most correlated with the outcomes. Additionally, there was a strong correlation between motivation and positive impact ($r = .587$, $p < .001$).The two modes of use, active and passive, were not significantly correlated ($r = .031$), suggesting that they exist and occur separately – not as an end point on a continuum.

Table 3: *Means, Standard Deviations, and Pearson Correlations*

Construct	M	SD	1	2	3	4	5	6	7
1. MOT	3.39	.78	-						
2. ACT	2.65	.98	.289***	-					
3. PAS	3.34	.97	.448***	.031	-				
4. DL	3.50	.91	.515***	.146**	.517***	-			
5. NEU	3.27	1.02	.479***	.103	.444***	.379***	-		
6. PSI	3.24	.91	.587***	.408***	.260***	.416***	.321***	-	
7. NSI	2.81	.92	.291***	.278***	.301***	.119*	.554***	.294***	-

Note. MOT = motivation; ACT = active connected use; PAS = passive comparative use; DL = digital literacy; NEU = neuroticism; PSI = positive social impact; NSI = negative social impact. *p < .05. **p < .01. ***p < .001.

4.3 Adjusted positive- and negative-impact models

The control-only positive-impact model was not significant, R-squared = .082, adjusted R-squared = .021, F(21, 317) = 1.35, p = .143. The addition of motivation, active connected use, and digital literacy, boosted the explained variance by 38.1 percentage points, delta F(3, 314) = 74.20, p < .001. The full model explained 46.3% of the variance, adjusted R-squared = .422, F(24, 314) = 11.27, p < .001. All three focal predictors were significant: motivation, B = .507, SE = .062, beta = .438, p < .001; active use, B = .245, SE = .041, beta = .265, p < .001; and digital literacy, B = .163, SE = .050, beta = .163, p = .001. The main effect was significant for literacy, and supported H2, for which no testing of moderation was performed, but for H2, the main effect was significant indicating an additive resource.

The control-only negative-impact model explained 9.9% of variance, adjusted R-squared = .039, F(21, 317) = 1.65, p = .037. Motivation, passive comparative use and neuroticism accounted for an additional 25.6 percentage points in explained variance, delta F(3, 314) = 41.41, p < .001. The full model explained 35.4% of negative impact, adjusted R-squared = .305, F(24, 314) = 7.18, p < .001. Neuroticism was the only significant focal predictor, B = .473, SE = .053, beta = .520, p < .001. Motivation was nonsignificant, B = -.007, p = .916, as was passive use, B = .072, p = .179. So, H6 was given direction evidence, not supported by its more rigorous adjusted test.

Table 4: *Focal Predictors in the Hierarchical Adjusted Models*

Outcome	Predictor	B	SE	Beta	t	p
Positive impact	Motivation	.507	.062	.438	8.226	< .001
Positive impact	Active connected use	.245	.041	.265	5.941	< .001
Positive impact	Digital literacy	.163	.050	.163	3.282	.001
Negative impact	Motivation	-.007	.068	-.006	-.106	.916
Negative impact	Passive comparative use	.072	.053	.075	1.348	.179
Negative impact	Neuroticism	.473	.053	.520	8.966	< .001

Note. N = 339. Both models accounted for the factors of age, gender, education, daily use time, and eight platform indicators. The R-squared value for the positive model was .463, and the adjusted R-squared value was .422. Negative model: R-squared = .354, adjusted R-squared = .305. All focal decisions were maintained with the use of HC3-robust standard errors.

The results of the regression diagnostics did not affect these conclusions. The largest VIF was 1.741. No heteroscedasticity was found in the positive model: Breusch-Pagan tests: chi-square (25) = 27.90, p = .312, or the negative model: chi-square (25) = 20.45, p = .723. Durbin-Watson values were 2.024 and 2.110 while maximum Cook's distances were .111 and .043, respectively. The residuals for the negative model were approximately normal, W = .995, p = .340. Residuals were judged to be normally distributed, W = .979, p < .001, though the residual skewness was small (-.371). The absolute standardized residual values for four case(s) in the positive model and one case in the negative model exceeded the range of 3 to 5. Focal decisions were maintained under all the HC3-robust standard errors.

4.4 Indirect effects

The positive path mediation model was significantly explained by motivation with a value of .331, p < .001. Of course, when active use was predicted, the other factors (motivation and controls) remained the same, b = .243, p < .001. The bootstrapped indirect effect was .080, 95% CI [.035, .131], supporting H3. The other direct association was also significant, B = .607, p < .001, which is suggestive of partial statistical mediation.

The negative-path mediation equation predicted passive comparative use, a = .551, p < .001, and passive use predicted negative impact without including neuroticism, b = .203, p < .001. The indirect effect was .112, 95% CI [.049, .183], and the direct association remained significant, B = .194, p = .007. It was then decided that the H7 should be supported in the mediation model specified. This estimate is model-dependent: If the separate full regression with neuroticism was performed, the amount of passive use was not significant. This indirect association should not be considered as a proof of a causal sequence, or as the proof of the fact that passive use confers additional variance, apart from neuroticism.

4.5 Moderation and exploratory group comparisons

There was no significant interaction between active use and positive impact (B = .033, SE = .036, p = .365); H4 was therefore rejected. A similar pattern of results was observed for the passive-use association with negative impact; B = .027, SE = .039, p = .490, and H8 was not accepted. In this

sample, literacy and neuroticism were found to be more like additive predictors than slope changing conditions.

No gender, age or platform difference was found in exploratory comparisons that remained significant after Holm adjustment. The worst adjusted result was for the Instagram-user versus nonuser comparison for negative impact (p-Holm = .061), which was not significant at the .05 level. The results of these null findings are not reflective of equivalence as the sample was nonprobability based with some groups being small.

Table 5: *Hypothesis Tests: Direct, Indirect, and Interaction Effects*

Hypothesis	Tested relationship	Estimate	SE or 95% CI	p	Decision
H1	MOT -> ACT (a path)	a = .331	-	< .001	Supported
H2	ACT -> PSI (adjusted)	B = .245	SE = .041	< .001	Supported
H3	MOT -> ACT -> PSI	Indirect = .080	[.035, .131]	-	Supported
H4	ACT x DL -> PSI	B = .033	SE = .036	.365	Rejected
H5	MOT -> PAS (a path)	a = .551	-	< .001	Supported
H6	PAS -> NSI (adjusted)	B = .072	SE = .053	.179	Not supported in adjusted model
H7	MOT -> PAS -> NSI	Indirect = .112	[.049, .183]	-	Supported; model-sensitive
H8	PAS x NEU -> NSI	B = .027	SE = .039	.490	Rejected

Note. Indirect-effect confidence intervals used 5,000 bootstrap resamples. The H7 mediation model did not include neuroticism; passive use was nonsignificant when neuroticism entered the full negative-impact regression. Arrows indicate the tested direction and do not establish causality.

5. Discussion

5.1 Principal findings

The study was directed towards the association between motives for social media use and perceived positive and negative social impact and the different ways of using them. There are three key findings. There was first the case of predicting positive impact through motivation, active connected use, and digital literacy factors separately, without taking into account other factors such as demographics, time and platforms. Second, the effect of neuroticism was much stronger as a predictor of a negative impact than was passive comparative use, and neuroticism proved to

be a much more stable predictor of a negative impact. Third, the two proposed indirect effects were significant, with the passive pathway relying on the specification of the model and the two proposed moderators having no effect on the corresponding use-outcome slope.

The results lend to a differentiated approach to social media, but also give reasons for caution about employing an active and passive distinction. The associations of participatory and observational use with perceived benefit remained when a high level of psychological vulnerability was added as a covariate, whereas those for negative impact were exclusive to participatory use. This conforms to the extended active-passive model, in which the determination of outcomes is not only based on the labels of the activities, but also on the description of the persons, content, relationship and context of the activity (Valkenburg et al., 2022; Verduyn et al., 2022).

5.2 Motivation feeds both pathways

The active connected use was positively predicted by motivation, supporting H1 and H5 was also positively predicted by the passive comparison use. This finding aligns with contemporary uses-and-gratifications studies finding that all these were overlapping motives for the use of social media: Connection, Information, Entertainment, Expression, Support, Convenience and Escape (Bhatiasevi, 2024; Falgoust et al., 2022). It is also consistent with qualitative findings of non-univocal relationships between motives and a single behavior or outcome within Instagram (Romero Saletti et al., 2022).

The more strongly motivated connection to the passive side indicates that there is no guarantee that purposeful use will be evident participation. Observing satisfies the informational, relational, entertainment and monitoring needs of users. This is conceptually vital: Don't presume that someone isn't motivated if he or she uses it passively; and don't presume that someone is more or less motivated if he or she uses it actively. A more satisfactory model distinguishes between purpose of use and a behavioral form in which the purpose is being pursued. Concurrently, the motivation measure was the least psychometrically sound measure in the study. The large domains may have a better chance at being distinguished as separate motive dimensions than one general dimension. Replication should thus be tested separately in the following areas: connection, information, entertainment, expression and escape.

5.3 Connected activity and digital literacy are associated with positive impact

The positive (adjusted) model explained 46.3% of the variance in the outcome while contributing independently, with each factor, that is, motivation, active connected use and digital literacy, contributing to the outcome. The active-use result is consistent with the evidence that communicative and relational practices can positively impact well-being and social support, and with the meta-analysis results that suggest small to medium sized (but different) effects of communicative and relational practices on well-being (Godard & Holtzman, 2024; Marciano et al., 2024). This current study used the term use in conjunction with the terms use, responded, shared, discussed, and created, and with collaborative efforts. The coefficient should thus be interpreted as evidence of a connection between participation and posting, and not as a general statement of the positive effects of posting.

The result might be due to relational context. Han and Yang (2023) discovered that comparison can do damage in the eyes of others and that such damage can be mitigated by the feeling of closeness and support. Such support or visibility can be provided in active exchanges, but not necessarily. Moreover, in Pakistan, the impacts of connected participation might not only be about personal health and well-being but also social capital, civic information and political participation (Shahzad & Omar, 2021). This outcome measure was not only clinical mental health related, but it also included relationship building, knowledge, social awareness, support, and well-being. This wide coverage is both an advantage and a disadvantage for analysing the impact of social perception because the coefficient cannot be mechanically compared with studies that just measure the positivity of life satisfaction or depression.

There is a likely behavior-to-goal-translation in users' motivation with the large motivation-active-positive indirect effect. Platforms are used for connection, information, expression or belonging, and connected participation can then be a platform for opportunities for learning and support. Motivation continued to be directly related to positive impact suggesting that it was a single route, activity. The remaining relationship may be accounted for by selective exposure, by perceived goal attainment or by forms of participation that are not measured. All the variables were measured at a single point in time, however, which is why the indirect effect is an association in nature, and

not necessarily a causal one that demonstrates that motives happened before behavior and outcomes.

The digital literacy showed a positive main effect. It is aligned with the literacy models that include dealing with the source, algorithm awareness, managing privacy, reflecting and taking responsible actions (Heiss et al., 2023; Polanco-Levican & Salvo-Garrido, 2022; Valle et al., 2025). It is also a complementary intervention to Pakistan based studies which have proved the effectiveness of providing practical feedback for enhancing misinformation discernment (Ali & Qazi, 2022; Ali & Qazi, 2023). There are several ways in which literacy can contribute to the user's benefit: selecting trustworthy sources; operating boundaries; detecting manipulation; and taking more deliberate action. Its contribution is then seen as being wider than the proposed interaction with active use.

5.4 Passive use is not a sufficient explanation of negative impact

The passive comparative use correlated with the negative impact, however when the influences of motivation, neuroticism and the controls were taken into consideration, the coefficient became nonsignificant. This is a more sophisticated outcome compared to associations between upward comparison, problematic use, and worse mental health and feelings of loneliness (Braghieri et al., 2022; Irmer & Schmiedek, 2023; Santini et al., 2025; Wu et al., 2024). The difference is in theory explanatory – not necessarily opposite. The processes of problematic use and comparing to the up are more specific than ordinary observation. Passive composite was comprised of common behaviors: "scrolling" (viewing), "watching" (listening), "browsing" (reading), and "consuming" (reading) without creating, and can be harmless, helpful, or injurious based on content and interpretation.

Facebook engagement research also indicates that, more than a general engagement category, social content and comparison processes offer a better description of self-esteem (Trieu et al., 2021). The present results confirm that one. Observing posts will likely not have a uniform effect; it may be a comparison to the upward, a rumination, a sense of hostility, exposure to misinformation, or a sense of exclusion. These proxies of passivity should be replaced with direct measures of these proximal processes in future studies.

The indirect negative pathway is a specific pathway that needs to be taken care of. Passive use was directly predicted by motivation, and negatively predicted by passive use in the mediation model without neuroticism. A bootstrap confidence interval did not contain zero, consistent with a positive answer to H7. However, when neuroticism was added to the full outcome model, it did not add uniquely to passive use. One possible explanation is that the two factors of passive comparison and emotional vulnerability are both explicable. The latter is what is called a "reciprocal selection" — distress and emotionally reactive users may be attracted to some modes of observation, which in turn can perpetuate distress. Despite the fact that there is evidence of bidirectional relations between loneliness and problematic use, a temporal model is needed (Wu et al., 2024)..

5.5 Neuroticism operates as a direct vulnerability, not a moderator

The most prominent focal predictor of negative impact was neuroticism with the standardized coefficient of .520. This is in line with the study conducted by Dilawar et al., (2022) in Pakistan, and the study by Meynadier et al., (2024) which found that neuroticism is the strongest of all the Big Five personality characteristics linked to problematic use of social media. It is also suitable for the contexts in which there is a mediation relationship between neuroticism and passive mobile network use, being mediated by fear of missing out and online social support (Zhang et al., 2023).

The interaction between the use of the neuroticism factor and passive use was not significant. This is similar to the first stage of the moderated mediation pattern that was reported by Gugushvili et al. (2022) in the case of Facebook intensity and problematic use, but at the same time not consistent along the whole pathway. Any variability in platform, behavior, sample and outcome is probably significant. The current passive measure was more of a general observation while the outcome was a combination of multiple negative experiences. The general passive use-to-outcome slope is estimated after selection into comparison, fear of missing out, rumination, or emotional interpretation phases, which might be mediated by a type of neuroticism. The direct or mediated vulnerability model is thus more attractive than the posited simple interaction.

5.6 Why the moderation hypotheses failed

Strength of the association of the behaviors did not change with digital literacy or neuroticism. However, a lack of interactions doesn't mean that these qualities are unimportant. Instead, it was additive relevance that was supported. Neuroticism predicted more negative impacts with all levels of passive use, while digital literacy predicted more positive impacts with all levels of active use. This distinction is more precise in theory, the data are in support of different levels of outcome, and not different slopes.

The ability to detect interaction reliably is also more difficult than the ability to detect interaction reliably when there is error in composite measures. Some of the other constructs may have been insensitive to complex relationships due to the weak motivation AVE and marginal AVE. There may be more proximal moderators that would do better. Positive constructs that are relevant for this pathway include verification behavior, privacy self-efficacy, relationship quality and the trustworthiness of shared content. The concepts of upward comparison orientation, fear of missing out, rumination, relational closeness, and emotion regulation may be more proximal to negative pathway than overall neuroticism.

5.7 Theoretical contributions

This study has three contributions. First, it lays the foundations for motivation and two forms of engagement, rather than addressing motivation, screen time and outcomes as separate issues. With respect to the question of purpose and behavior, motivation proved to be a valid predictor of both active and passive use, suggesting that purpose and behavior should be considered separately.

Secondly, the analysis results add nuance to the concept of active-passive. Active connected use had a positive adjusted relationship and passive comparative use did not have a negative adjusted relationship after the introduction of neuroticism. This is an asymmetry that points to the contrary in that attaching equal and opposite effects to the two labels is problematic. Whereas in the positive model it seems to be a significant behavior of participation, in the negative model it is not enough without specifying a comparison and a vulnerability.

Third, the results shift digital literacy and neuroticism from the moderating to the additive characteristics. The functional form of the estimated resource-vulnerability logic is still valid, but the functional form is different. The tested use-level interaction was not significant in either the positive or negative direction of impact; however, literacy had a positive impact, and neuroticism had a negative impact. This discovery warrants theory to separate out level effects from mediation and moderation from a more generic perspective of personal characteristics as boundary conditions.

5.8 Practical implications

The results are applicable for universities and community organizations, to pave the way for useful and mutual interaction instead of the quantity of interactions. There is a need to incorporate misinformation checking, source appraisal, algorithm awareness, privacy management, emotional self-monitoring and positive contribution in a digital-literacy program. Practice-based instruction and feedback, instead of generic warnings, are more promising and, as illustrated by the Pakistan experiments of Ali and Qazi (2022, 2023), can be observed. Similar to the literacy reviews carried out recently, teaching and learning literacy also stress inquiry, reflection, and action instead of technical skills. Like the recent literacy reviews, teaching and learning literacy also focuses on inquiry, reflection and action, not just on technical skill.

On platforms, the results back more contextual information around the source content, friction prior to resharing content that's been flagged as problematic, easy-to-access privacy and reporting features, and flexibility for recommendations that involve comparison. Design should be used to facilitate the ability of the user to interact meaningfully with the other person in a reciprocal fashion, but without expecting that any increase in posting is good. Safety measures are especially crucial in environments where there are unequal participation costs due to abuse facilitated by technology (Digital Rights Foundation, 2025).

Advice for student-support and mental-health services is likely to be too general, as reducing screen time is likely to be a very broad proposal. The high result for the neuroticism factor indicates that individual differences should be considered when assessing rumination, stress sensitivity, fear of missing out, upward comparison, and quality of online relationships. This does not imply that

there were no platforms or social environments to shape exposure, just that it is still done by the high-neuroticism users. That implies that there needs to be an equivalent response to the distress-generating mechanism.

5.9 Limitations and future research

There are a number of caveats that restrict the conclusions. This cross sectional design has no indication of a temporal order or cause and effect. The bootstrapped indirect effects are statistical decompositions of contemporaneous associations but NOT demonstrations of processes over time. To explore reciprocal influence and within-person change, there is a need for a longitudinal design, experience-sampling design, and consenting design using digital traces.

Young, high levels of student, digitally engaged in the convenience sample and network based sample. This should not be considered as indicative of all adults in Pakistan, especially older adults, rural communities, individuals with limited connectivity, and individuals who were unable to access the online questionnaire. External validity would be enhanced by probability based or stratified research by province, language, level of education, urban/rural context.

Common-method, recall and social-desirability bias were a possibility, as all constructs were self-reported in a single questionnaire. Howard et al. (2024) and Podsakoff et al. (2024) discussed this issue and stated that Harman's first factor percentage is not able to solve this problem. Future research should consider separating measurement times, include multiple measures if possible, and include both self-report and behavioral measures.

The major technical constraint is the validity of measurement. The seven scales were acceptable and had some cross loading and low loading on an exploratory factor structure. All items showed low AVE scores with only a marginal AVE for active use, passive use, and negative impact. The AVE scores were low for all items and were only marginally acceptable for active use, passive use, and negative impact items. The items were developed by the researchers based on the most recent literature and no pilot study or expert-panel content-validity index was found that could be used to support this. Refining the motive domains, conducting confirmatory factor analysis and testing measurement invariance should be done before comparing groups with new data.

Last, but not least, indicators were not exclusive and were not measures of the intensity, feed content, algorithms or communication partners of the platform. Occupied was not controlled as this would have resulted in low numbers of indicators in small categories. It is therefore possible that there are other factors that are confounded with the treatment but have not been measured. The model would additionally include a stronger negative path that would estimate passive observation, upward comparison, fear of missing out, rumination, relational closeness, social support and emotion regulation. It is important to assess changes in verification, participation, privacy behaviour and wellbeing over time within literacy training groups, rather than simply measuring knowledge, in intervention studies.

6. Conclusion

Motives, engagement patterns and user characteristics were more predictive of perceived social impact than any of the general exposure indicators. In Pakistan, there were 339 social media users over the age of 18; each of these factors was found to be a significant factor independently influencing positive impact. In Pakistan, it was found that each of the three factors (motivation, active connected use and digital literacy) has significantly influenced positive impact among 339 user adults of social media. Negative impact was the greatest predictor of neuroticism. Active use had a strong indirect relationship to positive impact while passive use had an indirect relationship in a model without neuroticism and had no independent adjusted relationship to positive impact. The tested relationship was not affected by digital literacy or neuroticism.

The lesson to be learned is not that users should just post more and scroll less. Digital competence, design of platforms that are safer, and a platform to emotional vulnerability contribute to supporting the outcomes when there is purposeful reciprocal participation. Research and policy should not be limited to the notion of screen time and the moralizing terms of active or passive use of screens.

References

[1] Ali, A., & Qazi, I. A. (2022). Digital literacy and vulnerability to misinformation: Evidence from Facebook users in Pakistan. *Journal of Quantitative Description: Digital Media, 2*. https://doi.org/10.51685/jqd.2022.025

[2] Ali, A., & Qazi, I. A. (2023). Countering misinformation on social media through educational interventions: Evidence from a randomized experiment in Pakistan. *Journal of Development Economics, 163*, 103108. https://doi.org/10.1016/j.jdeveco.2023.103108

[3] Bhatiasevi, V. (2024). The uses and gratifications of social media and their impact on social relationships and psychological well-being. *Frontiers in Psychiatry, 15*, 1260565. https://doi.org/10.3389/fpsyt.2024.1260565

[4] Bowden-Green, T., Hinds, J., & Joinson, A. (2021). Understanding neuroticism and social media: A systematic review. *Personality and Individual Differences, 168*, 110344. https://doi.org/10.1016/j.paid.2020.110344

[5] Braghieri, L., Levy, R., & Makarin, A. (2022). Social media and mental health. *American Economic Review, 112*(11), 3660–3693. https://doi.org/10.1257/aer.20211218

[6] Digital Rights Foundation. (2025). *Digital security helpline annual report 2024*. https://digitalrightsfoundation.pk/wp-content/uploads/2025/04/Digital-Security-Helpline-Annual-Report-2024-1.pdf

[7] Dilawar, S., Liang, G., Elahi, M. Z., Abbasi, A. Z., Shahani, R., & Gonlepa, M. K. (2022). Interpreting the impact of extraversion and neuroticism on social media addiction among university students of Pakistan: A mediated and moderated model. *Acta Psychologica, 230*, 103764. https://doi.org/10.1016/j.actpsy.2022.103764

[8] Falgoust, G., Winterlind, E., Moon, P., Parker, A., Zinzow, H., & Madathil, K. C. (2022). Applying the uses and gratifications theory to identify motivational factors behind young adults' participation in viral social media challenges on TikTok. *Human Factors in Healthcare, 2*, 100014. https://doi.org/10.1016/j.hfh.2022.100014

[9] Giancola, D., Travers, R., & Coulombe, S. (2023). Scrolling through the COVID-19 pandemic: Exploring the perceived effects of increased social media use on the mental health of undergraduate university students. *Social Media + Society, 9*(2). https://doi.org/10.1177/20563051231177970

[10] Godard, R., & Holtzman, S. (2024). Are active and passive social media use related to mental health, well-being, and social support outcomes? A meta-analysis of 141 studies. *Journal of Computer-Mediated Communication, 29*(1), zmad055. https://doi.org/10.1093/jcmc/zmad055

[11] Gugushvili, N., Taht, K., Ruiter, R. A. C., & Verduyn, P. (2022). Facebook use intensity and depressive symptoms: A moderated mediation model of problematic Facebook use, age, neuroticism, and extraversion. *BMC Psychology, 10*, 279. https://doi.org/10.1186/s40359-022-00990-7

[12] Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). *A primer on partial least squares structural equation modeling (PLS-SEM)* (3rd ed.). Sage.

[13] Han, Y., & Yang, F. (2023). Will using social media benefit or harm users' self-esteem? It depends on perceived relational-closeness. *Social Media + Society, 9*(4). https://doi.org/10.1177/20563051231203680

[14] Heiss, R., Nanz, A., & Matthes, J. (2023). Social media information literacy: Conceptualization and associations with information overload, news avoidance and conspiracy mentality. *Computers in Human Behavior, 148*, 107908. https://doi.org/10.1016/j.chb.2023.107908

[15] Howard, M. C., Boudreaux, M., & Oglesby, M. T. (2024). Can Harman's single-factor test reliably distinguish between research designs? Not in published management studies. *European Journal of Work and Organizational Psychology, 33*, 790–804. https://doi.org/10.1080/1359432X.2024.2393462

[16] Irmer, A., & Schmiedek, F. (2023). Associations between youth's daily social media use and well-being are mediated by upward comparisons. *Communications Psychology, 1*, 12. https://doi.org/10.1038/s44271-023-00013-0

[17] Kemp, S. (2025, November 8). *Digital 2026: Pakistan*. DataReportal. https://datareportal.com/reports/digital-2026-pakistan

[18] Kline, R. B. (2023). *Principles and practice of structural equation modeling* (5th ed.). Guilford Press.

[19] Marciano, L., Lin, J., Sato, T., Saboor, S., & Viswanath, K. (2024). Does social media use make us happy? A meta-analysis on social media and positive well-being outcomes. *SSM - Mental Health, 6*, 100331. https://doi.org/10.1016/j.ssmmh.2024.100331

[20] Meynadier, J., Malouff, J. M., Schutte, N. S., & Loi, N. M. (2024). Meta-analysis of associations between five-factor personality traits and problematic social media use. *Current Psychology, 43*, 23016–23035. https://doi.org/10.1007/s12144-024-06052-y

[21] Podsakoff, P. M., Podsakoff, N. P., Williams, L. J., Huang, C., & Yang, J. (2024). Common method bias: It's bad, it's complex, it's widespread, and it's not easy to fix. *Annual Review of Organizational Psychology and Organizational Behavior, 11*, 17–61. https://doi.org/10.1146/annurev-orgpsych-110721-040030

[22] Polanco-Levican, K., & Salvo-Garrido, S. (2022). Understanding social media literacy: A systematic review of the concept and its competences. *International Journal of Environmental Research and Public Health, 19*(14), 8807. https://doi.org/10.3390/ijerph19148807

[23] Romero Saletti, S. M., Van den Broucke, S., & Van Beggelaer, W. (2022). Understanding motives, usage patterns and effects of Instagram use in youths: A qualitative study. *Emerging Adulthood, 10*(6), 1376–1394. https://doi.org/10.1177/21676968221114251

[24] Santini, Z. I., Thygesen, L. C., Andersen, S., Tolstrup, J. S., Koyanagi, A., Nielsen, L., Meilstrup, C., Koushede, V., & Ekholm, O. (2025). Social media addiction predicts compromised mental health as well as perceived and objective social isolation in Denmark: A longitudinal analysis of a nationwide survey linked to register data. *International Journal of Mental Health and Addiction, 23*, 3136–3153. https://doi.org/10.1007/s11469-024-01283-3

[25] Shahzad, S., & Omar, B. (2021). Social network matters: The influence of online social capital on youth political participation in Pakistan. *Journal of Information Technology & Politics, 18*(4), 430–442. https://doi.org/10.1080/19331681.2021.1900018

[26] Trieu, P., Ellison, N. B., Schoenebeck, S. Y., & Brewer, R. N. (2021). Implications of Facebook engagement types and feed's social content for self-esteem via social comparison processes. *Social Media + Society, 7*(3). https://doi.org/10.1177/20563051211042400

[27] Valkenburg, P. M., van Driel, I. I., & Beyens, I. (2022). The associations of active and passive social media use with well-being: A critical scoping review. *New Media & Society, 24*(2), 530–549. https://doi.org/10.1177/14614448211065425

[28] Valle, N., Zhao, P., Freed, D., Gorton, K., Chapman, A. B., Shea, A. L., & Bazarova, N. N. (2025). Towards a critical framework of social media literacy: A systematic literature review. *Review of Educational Research, 95*(4). https://doi.org/10.3102/00346543241247224

[29] Verduyn, P., Gugushvili, N., & Kross, E. (2022). Do social networking sites influence well-being? The extended active-passive model. *Current Directions in Psychological Science, 31*(1), 62–68. https://doi.org/10.1177/09637214211053637

[30] Wu, P., Feng, R., & Zhang, J. (2024). The relationship between loneliness and problematic social media usage in Chinese university students: A longitudinal study. *BMC Psychology, 12*, 13. https://doi.org/10.1186/s40359-023-01498-4

[31] Zhang, S., Wu, Q., & Liu, R. (2023). The relationship between neuroticism and passive use of mobile social networks among Chinese young adults: The mediating role of fear of missing out and online social support. *Acta Psychologica, 236*, 103919. https://doi.org/10.1016/j.actpsy.2023.103919

[32] Ziapour, A., Malekzadeh, R., Darabi, F., Yildirim, M., Montazeri, N., Kianipour, N., & Nejhaddadgar, N. (2024). The role of social media literacy in infodemic management: A systematic review. *Frontiers in Digital Health, 6*, 1277499. https://doi.org/10.3389/fdgth.2024.1277499

Declarations

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