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The dark side of Facebook: Divergent paths to discontinuance through procrastination and perceived risk

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Abstract

Social media platforms face a growing trend of user discontinuance. The literature has predominantly explained this phenomenon through the Stressor-Stress-Outcome paradigm, focusing the analysis on emotional exhaustion as the causal mechanism. However, evidence suggests that problematic platform use may also drive discontinuance. The present study examines the role of procrastination and perceived risk as antecedents of dissatisfaction and discontinuance intention on Facebook, using Expectation-Confirmation Theory as an organizing framework. Data were collected from 369 adult Facebook users in the United States through a self-administered questionnaire and analyzed using partial least squares structural equation modeling. The results reveal a divergent mediation pattern: perceived risk increases dissatisfaction and activates a direct discontinuance response, while procrastination, paradoxically, reduces dissatisfaction by satisfying the user's need for escapism, yet simultaneously activates an independent self-regulatory response that drives discontinuance intention. This inconsistent mediation pattern constitutes a novel theoretical contribution that connects the discontinuance literature with that on self-regulation of technology behavior, and suggests that platform providers should address both dimensions through differentiated strategies.

Keywords: Discontinuance, procrastination, perceived risk, expectation-confirmation theory, social network

Introduction

Social media platforms have become part of everyday application use at a global scale, reaching 5.79 billion active users in 2026 (Meltwater, 2026). However, behind this figure, a less favorable trend for the industry is observable: annual active user growth has declined steadily over time. While Facebook recorded year-over-year growth of 14% in 2017 (Meta, 2018), that pace progressively decreased in subsequent years, from 9% in 2018 (Meta, 2019) to just 3% in 2023 (Meta, 2024).

In the United States specifically, this stagnation is visible among both young people and adults. Although Facebook remains the second most used social network among adults, its use has not grown significantly, while platforms such as Instagram, TikTok, and WhatsApp have gained users (Pew Research Center, 2025a). At the same time, discontinuance intent is growing: between April 2024 and March 2025, Facebook recorded more than 538,000 average monthly searches on how to delete or deactivate accounts, ranking only behind Instagram (Ahmad, 2025). This trend is particularly pronounced among teenagers aged 13 to 17, whose usage has dropped from 71% in 2014–2015 to approximately 30% at present (Pew Research Center, 2025b). In this context, understanding why users discontinue their use is a priority for the industry.

The literature has predominantly explained SNS discontinuance under the Stressor-Stress-Outcome (SSO) paradigm, which posits that usage stressors—primarily social overload—generate emotional exhaustion that pushes the user to abandon the platform as a relief strategy (Maier, Laumer, Eckhardt, et al., 2015; Zhang et al., 2016). This causal chain has been consistently replicated and constitutes the dominant explanatory core of the phenomenon (Feng et al., 2024; Fu et al., 2020). However, this approach confines discontinuance to stress situations, overlooking that the user is embedded in a broader social system and that their evaluation of the platform may respond to factors beyond exhaustion.

Recent research has expanded this dominant view. From Social Capital Theory, trust in the platform and the strength of interpersonal ties act as inhibitors of discontinuance (Bravo & Cuentas-Romero, 2023). From organizational Turnover Theory, SNS embeddedness emerges as a relevant inhibitor of discontinuance, while the perception of available alternatives and dissatisfaction act as drivers of abandonment (Bravo & Cuentas-Romero, 2025). These findings suggest that discontinuance is a more complex phenomenon than a mere response to stress. However, a relevant explanatory gap persists: the SSO paradigm does not incorporate dissatisfaction as a central construct, while the Turnover Theory stream treats it as a proximal predictor of discontinuance without specifying which aspects of the user's experience with Facebook generate it.

A potential source of these determinants of dissatisfaction lies in those dimensions associated with problematic use of the platform. These manifestations include harassment, cyberbullying, procrastination, misinformation, and privacy abuse (Baccarella et al., 2018; Boroon et al., 2021; Fox & Moreland, 2015; Huang et al., 2025; Meier et al., 2016). Within this spectrum, procrastination and perceived risk emerge as distinctive factors linked to discontinuance (Huang et al., 2025; Marttila et al., 2021; Sirois & Pychyl, 2013; Sümer & Büttner, 2022; Van der Heijden, 2004). However, their effects on dissatisfaction and discontinuance intention have not been sufficiently examined, and—as this study proposes—their causal mechanisms are divergent: not all problematic use of Facebook leads to discontinuance through the same pathways.

This study examines the role of procrastination and perceived risk as antecedents of dissatisfaction and discontinuance intention, using the Expectation-Confirmation Theory (ECT) of Bhattacharjee (2001) as an organizing framework. The model controls for effects already established in the literature: exhaustion (Maier, Laumer, Weinert, et al., 2015), expectation disconfirmation (Bhattacharjee, 2001), and SNS embeddedness (Bravo & Cuentas-Romero, 2025), thereby allowing the incremental contribution of the dark side to discontinuance to be estimated. The central theoretical contribution is to show that perceived risk and procrastination operate through causally distinct mechanisms: perceived risk generates dissatisfaction and drives discontinuance; procrastination, paradoxically, reduces dissatisfaction because Facebook effectively satisfies the user's need for escapism, while simultaneously activating a self-regulatory response that drives discontinuance intention. This inconsistent mediation pattern has not been previously reported in the SNS discontinuance literature and constitutes the central finding of this study.

Theoretical Development

The Dark Side of Facebook

The literature has broadly documented that Facebook use entails negative consequences at both the individual and social levels (Boroon et al., 2021; Stangl et al., 2023). These problematic manifestations of use have been collectively referred to as the "dark side" of Facebook and include cyberbullying, misinformation, addictive use, privacy abuse, and online social stress (Boroon et al., 2021; Huang et al., 2025). These consequences may generate serious effects on user well-being and on the user's relationship

with the platform (Stangl et al., 2023). The literature indicates that procrastination and perceived risk may be two dimensions of the dark side that are particularly relevant for explaining discontinuance intention. The following sections develop each dimension within the ECT framework.

Expectation-Confirmation Theory

The Expectation-Confirmation Theory (ECT) was proposed by Bhattacharjee (2001) to explain continuance intention in information systems use. The model adapts to the IS context the work of Oliver (2014), who posited that consumer satisfaction depends on the confirmation or disconfirmation of prior expectations. Bhattacharjee (2001) introduces a conceptually relevant modification: beyond the disconfirmation mechanism, the model incorporates IS-specific cognitive beliefs—particularly perceived usefulness—that influence satisfaction and behavioral intention independently. In this way, continuance intention is determined by two routes: an affective one, mediated by satisfaction, and a cognitive one, exerted directly by the user's beliefs about the system. This dual-path architecture has received broad empirical support in technology continuance contexts (Akdim et al., 2022) and has been applied in the SNS's discontinuance phenomenon (Bravo & Cuentas-Romero, 2025).

Adapting the ECT to the Dark Side of Facebook

Following an approach similar to that of Huang et al. (2019) in the context of gaming applications, this study adapts the ECT architecture to examine how beliefs derived from the dark side of Facebook affect dissatisfaction with the platform and discontinuance intention. This adaptation follows the logic established by Bhattacharjee (2001), according to which IS-specific beliefs operate on satisfaction and on behavioral intention through pathways independent of the expectation disconfirmation mechanism. In this study, procrastination and perceived risk fulfill the role of IS-specific beliefs relevant to the discontinuance context, analogously to the role perceived usefulness plays in the original ECT.

Expectation disconfirmation is retained in the model as a control variable, capturing the classical mechanism from Oliver (2014). This allows the incremental contribution of dark side beliefs on dissatisfaction to be isolated, beyond the already documented effect of disconfirmation. A similar treatment has been applied in prior studies that control for ECT variables in order to examine additional antecedents of satisfaction in IS contexts (Bhattacharjee & Lin, 2014). A distinctive aspect of this adaptation is that dark side beliefs are negative in nature, unlike perceived usefulness in the original ECT. The sign of their effects on dissatisfaction is therefore not uniform, but dependent on the specific nature of each belief and its relationship with platform use. The following sections develop this argument for each dimension and derive the corresponding hypotheses. Figure 1 summarizes the proposed model.

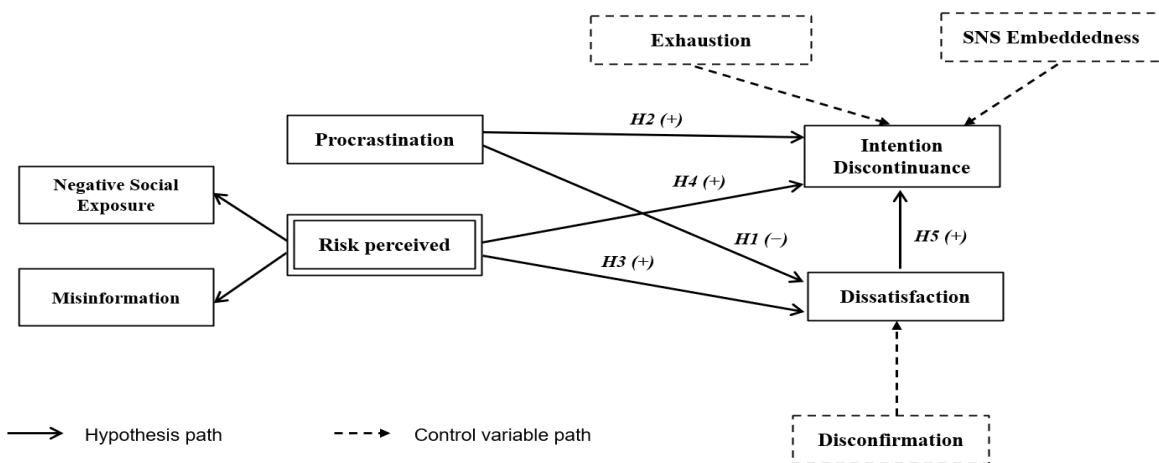


Figure 1. Research model

Procrastination

Procrastination is defined as the intentional postponement of an action despite knowing that such delay will have negative consequences for the individual (Lian et al., 2018). This definition situates procrastination within the self-regulatory failure tradition (Steel, 2007) rather than within the broader literature on emotion regulation or avoidance. It requires, specifically, that the delay be anchored to a concrete, deferrable action—the same criterion Steel (2007) uses to distinguish procrastination from simple decision avoidance—and that the individual undertakes it while expecting to be worse off for the delay. These conditions are not necessary features of emotion regulation or avoidance more generally, which justifies treating procrastination as a distinct construct rather than a restatement of those broader processes.

Procrastination involves the cognitive avoidance of tasks and engagement in activities whose implicit purpose is to distract from what should be done (Davis et al., 2002). Facebook has been identified as a procrastination tool (Przepiorka et al., 2023). Procrastinatory activity provides the user with immediate gratification through platform use, which is more attractive than the postponed activities (Meier et al., 2016). Users rely on Facebook to seek entertainment, relieve boredom, and stay in contact with others (Bhatiasevi, 2024; Boroon et al., 2021; Le & Dao, 2024). However, the time devoted to the platform reduces the time available for other life activities such as work, studies, or family (Schuster et al., 2023).

Within the ECT framework, procrastination operates as an IS-specific belief of a confirmatory nature. Facebook effectively fulfills the user's dysfunctional expectation of escapism. In Bhattacharjee (2001) terms, when the perceived performance of the system confirms the user's expectations—even when these are dysfunctional—the result is satisfaction with the service. This mechanism is consistent with what Van der Heijden (2004) posits, namely that hedonic and escapism uses generate positive affective evaluations of the technological system. Given that social networks provide immediate gratification by offering the user an alternative source of stimulation from aversive tasks (Sirois & Pychyl, 2013), positive evaluations of the system may emerge, as Van der Heijden (2004) suggests. Therefore, it is expected that users with a higher perception of procrastination associated with Facebook report lower dissatisfaction with the platform, given that the platform precisely satisfies the need that motivates its use in that state.

H1: Procrastination negatively influences dissatisfaction with Facebook.

Nevertheless, procrastination also activates a self-regulatory response in the user. According to Carver and Scheier (1982), individuals continuously monitor the discrepancy between their current behavior and their desired reference states and activate corrective processes when that gap becomes salient. When awareness of procrastinatory Facebook use signals a negative discrepancy with higher-order goals, the user is motivated to eliminate the source of the problem. Discontinuance constitutes the most definitive corrective action available to the user in this self-regulatory process.

Prior empirical evidence supports this self-regulatory pattern: individuals who are aware of their dysfunctional behavior in social network use develop the intention to reduce or discontinue (Luqman et al., 2020; Masood et al., 2022; Nascimento et al., 2025; Turel, 2015). In this sense, awareness of the procrastinatory use of Facebook generates a discontinuance intention that is independent of the affective evaluation of the platform, following the direct cognitive route established in the ECT (Bhattacharjee, 2001). The greater the perceived procrastination associated with Facebook use, the stronger the user's motivation to abandon the platform as a self-regulation strategy.

H2: Procrastination positively influences discontinuance intention.

Perceived Risk

Perceived risk in the SNS context is defined as the user's uncertainty regarding the adverse consequences derived from platform use, particularly those linked to interpersonal antisocial behaviors (Craker & March, 2016). These consequences include the sowing of discord, reputational damage, the obtaining of private information, and coercion (Baccarella et al., 2018; Craker & March, 2016; Demetis, 2020; Zerres & Breyer-Mayländer, 2024). Facebook has established as the platform with the highest prevalence of this type of behavior (Craker & March, 2016; Fox & Moreland, 2015), which manifests in the form of phishing, cyberstalking, identity theft, harassment, privacy invasion, and extortion (Baccarella et al., 2018; Dhir et al., 2021; Marttila et al., 2021; Molok et al., 2010; Xie & Karan, 2019). These risks have become key factors in the discontinuance of social network use (Huang et al., 2025; Marttila et al., 2021).

This study conceptualizes perceived risk as a second-order multidimensional construct composed of two first-order dimensions: negative social exposure and misinformation. The former captures the user's perception of being subject to antisocial behaviors directed at them personally, such as stalking or negative rumors (Craker & March, 2016; Dreßing et al., 2014). The latter reflects the perception that the platform facilitates the circulation of false or manipulated information, including fake profiles, fake news, and phishing attacks (Baccarella et al., 2018; Vishwanath et al., 2018).

Following the taxonomy of multidimensional constructs proposed by Edwards (2001) and its application to the Facebook context by Bravo and Libaque-Saenz (2022), perceived risk is conceptualized as a superordinate construct; that is, there exists a latent cognitive state of perceived vulnerability to the Facebook environment that underlies and causes both dimensions. Under this logic, an increase in the general perception of risk will produce covariation across both dimensions, given that these are distinct manifestations of Facebook constituting a threatening environment for the user.

Within the ECT framework, perceived risk operates as a negative IS-specific belief that generates dissatisfaction with the platform. When the user perceives that Facebook exposes them to antisocial threats or misinformation, they evaluate their service experience negatively, which translates into dissatisfaction (Bhattacharjee, 2001; Oliver, 2014). This mechanism is consistent with the findings of Huang et al. (2025), who found that dark side elements of social networks such as misinformation and cyberbullying explain the emergence of regret over social network use, which in turn accounts for dissatisfaction with platform use.

H3: Perceived risk positively influences dissatisfaction with Facebook.

Additionally, following the direct cognitive route of the ECT (Bhattacharjee, 2001), perceived risk exerts a direct effect on discontinuance intention that is independent of dissatisfaction. The perception of threat activates in the user an immediate avoidance response toward the platform (Saeri et al., 2014; Schmiede et al., 2009). This direct effect has been empirically documented in the social network context. On one hand, risks associated with misinformation have been identified as a reason for abandonment. Dinu et al. (2024) find that the perception of fake news explains the discontinuance of social network use through fatigue as a mediator. Similarly, Dang-Van et al. (2024) found that information that generated confusion among users fostered discontinuance intention.

On the other hand, studies related to cyberbullying concerns indicate that perceived risks of negative social exposure are important factors in social network discontinuance. Among Saudi adolescents, 19.7% reported having considered stopping internet use due to cyberbullying experiences (Gohal et al., 2023). Likewise, Niu et al. (2024), in a study with adults, show that cyberbullying experiences are associated with protective behaviors such as temporarily disconnecting from social networks to prevent further incidents and recover emotionally.

H4: Perceived risk positively influences discontinuance intention.

Dissatisfaction

Dissatisfaction is defined as the user's overall affective response to their prior experience with the platform (Bhattacharjee & Lin, 2014). Within the ECT framework, dissatisfaction is the central affective mechanism that translates the user's cognitive evaluations into behavioral intention (Bhattacharjee, 2001; Oliver, 2014). The relationship between dissatisfaction and discontinuance has received empirical support in SNS contexts (Bravo & Cuentas-Romero, 2025; Fu et al., 2021). In the context of this study, dissatisfaction mediates the effects of dark side beliefs on discontinuance, capturing the affective route of the model. Therefore:

H5: Dissatisfaction positively influences discontinuance intention.

Control Variables

The model includes three control variables that capture effects documented in prior SNS discontinuance literature, allowing the specific contribution of dark side beliefs to be isolated.

Expectation disconfirmation is retained as a control in the dissatisfaction equation, capturing Oliver (2014) classic mechanism by which unmet expectations generate dissatisfaction (Bhattacharjee, 2001).

Exhaustion—the outcome of social overload generated by Facebook use—is included as a control in the discontinuance equation (Baj-Rogowska, 2023; Fu et al., 2021; Pradhan, 2022). The overload-exhaustion-discontinuance chain constitutes the core of the adaptive paradigm predominant in the SNS literature (Luqman et al., 2017).

SNS embeddedness captures the inhibitory force that the user's digital relationship network exerts on their intention to abandon the platform (Bravo & Cuentas-Romero, 2023; Crossley et al., 2007; Sahoo et al., 2024). Prior research has empirically established its role as the relevant inhibitor of discontinuance on Facebook, justifying its treatment as a control variable in the present study.

Method

Design and Data Collection

The present study adopts a correlational, cross-sectional design. Data were collected through a self-administered questionnaire applied to adult U.S. Facebook users via Amazon Mechanical Turk (MTurk). This platform is appropriate for studies requiring large samples without specific participant expertise (Lowry et al., 2016). To ensure data quality, the following criteria were applied: U.S. residency, a prior task approval rate of at least 98%, and a minimum of 500 completed tasks on the platform. Three attention check questions and a CAPTCHA verification were included to screen out automated responses. Incomplete or careless responses were removed, yielding 369 valid questionnaires for analysis.

The data used comes from a research program on SNS discontinuance. Given that data collection incorporated constructs derived from multiple theoretical frameworks, independent publications were adopted to preserve the theoretical focus of each contribution. Two companion studies draw on the same dataset, addressing conceptually distinct research questions: one through a social capital framework and another through turnover theory. The present study is the only one within this program to examine dark-side psychological mechanisms—procrastination and perceived risk—through an Expectation-Confirmation Theory lens and does not overlap conceptually or empirically with either companion study.

To mitigate common method bias (CMB), the recommendations of Podsakoff et al. (2012) were followed: separation of predictor and outcome items, use of different scale formats (Likert and semantic differential), and interleaved presentation of items from different constructs.

Measurement

All instruments were adapted from scales validated in the literature. Seven-point scales were used throughout. Table 1 summarizes the constructs, number of items, source, sample item, and response scale.

Table 1. Constructs, scales, and sample items

Construct	Items	Source	Sample item	Scale
Discontinuance Intention	4	Bhattacharjee (2001); Zhang et al. (2016)	I intend to discontinue using Facebook in the next months	Likert
Dissatisfaction	4	Bhattacharjee (2001)	How do you feel (satisfied/dissatisfied) about your experience of Facebook usage?	Semantic differential
Disconfirmation	3	Lin et al. (2012)	My experience with using Facebook was better than what I expected (reversed)	Likert
Procrastination	4	Davis et al. (2002)	I find that I log on Facebook more when I have something else I am supposed to do	Likert
Negative Social Exposure [†]	3	Chang and Heo (2014)	I'm worried that I may encounter stalking on Facebook	Likert
Misinformation [†]	2	Chang and Heo (2014)	I'm worried that I may find fake news on Facebook	Likert
SNS Embeddedness	6	Crossley et al. (2007)	It would be difficult for me to leave my social network on Facebook	Likert
Exhaustion	4	Maier, Laumer, Weinert, et al. (2015)	How drained do you feel from your Facebook activities?	Frequency

[†] First-order dimensions of the second-order construct Perceived Risk.

Data Analysis

The model was assessed using partial least squares structural equation modeling (PLS-SEM) with SmartPLS 4 software (Ringle et al., 2024). PLS-SEM is appropriate for models with higher-order constructs and complex mediation structures (Hair et al., 2011). The second-order construct perceived risk was operationalized using the repeated indicators approach following Sarstedt et al. (2019). Assessment of the measurement model included reliability, convergent validity, and discriminant validity. The structural model was assessed using bootstrapping with 5,000 subsamples.

Data Analysis and Results

Sample Profile

The sample comprised 48.2% men and 51.8% women. The most frequent age range was 31 to 35 years. More than 87% of participants had held a Facebook account for six or more years, and 64.8% used the platform between 10 and 60 minutes daily.

Measurement Model Assessment

Table 2 presents reliability and convergent validity indicators. Cronbach's alpha values exceed the 0.7 threshold across all constructs, and composite reliability values are above 0.7, confirming the internal consistency of the scales (Hair et al., 2011). Average variance extracted (AVE) values exceed the 0.5 threshold, and factor loadings are above 0.7, indicating convergent validity, with the exception of one Disconfirmation item (loading = 0.609). Following the decision procedure for indicators in the 0.40–0.70 range (Hair et al., 2022), this item was retained: although its removal would increase this construct's AVE and composite reliability, both already exceed their respective thresholds with the item included, so removal would not correct any statistical deficiency. Weaker loadings below 0.70 are common in social science research and do not automatically warrant removal, particularly when the item contributes to content validity (Hair et al., 2022; Hulland, 1999). This item captures a global judgment of expectation confirmation, distinct from the specific comparative judgments captured by the construct's other two items, and its retention preserves the integrity of a validated three-item scale (Lin et al., 2012). One Procrastination item was removed for presenting a loading below the recommended threshold.

Table 2. Reliability, convergent validity, and factor loadings

Construct	α	CR	AVE	Loading range
Disconfirmation	0.688	0.831	0.627	0.609 – 0.876
Exhaustion	0.968	0.976	0.912	0.941 – 0.972
Dissatisfaction	0.946	0.961	0.860	0.894 – 0.954
Discontinuance Intention	0.931	0.951	0.828	0.886 – 0.938
Misinformation	0.927	0.965	0.932	0.963 – 0.968
Procrastination	0.898	0.936	0.829	0.892 – 0.932
Perceived Risk (2nd order)	0.859	0.900	0.644	0.701 – 0.878†
SNS Embeddedness	0.747	0.919	0.767	0.769 – 0.913
Negative Social Exposure	0.808	0.887	0.723	0.806 – 0.902

Consider that Misinformation and Negative Social Exposure are first-order dimensions of the second-order construct Perceived Risk. Following Rossiter (2002) framework, first-order components of an abstract higher-order construct require fewer items each, since content coverage is distributed across dimensions rather than concentrated within any single one. Consistent with this expectation, Misinformation exhibits strong reliability and validity indicators ($\alpha = 0.927$; CR = 0.965; AVE = 0.932; loadings between 0.963 and 0.968), and its high R^2 as a first-order dimension (77.0%) is consistent with the superordinate nature of the second-order construct.

Table 3 presents HTMT values for assessing discriminant validity. Most values fall below the 0.85 threshold (Henseler et al., 2015). Values for the first- and second-order Perceived Risk constructs exceed the limits in some cases, as they necessarily share high common variance, and due to the repeated indicators approach required by PLS. Discriminant validity was further corroborated through cross-loading analysis: each item loads higher on its corresponding construct than on any other, with differences exceeding 0.1 in all cases.

Table 3. Heterotrait-monotrait ratio (HTMT)

	1	2	3	4	5	6	7	8
1	—	—	—	—	—	—	—	—
2	0.167	—	—	—	—	—	—	—
3	0.772	0.387	—	—	—	—	—	—
4	0.486	0.362	0.619	—	—	—	—	—
5	0.165	0.365	0.280	0.286	—	—	—	—
6	0.209	0.361	0.135	0.063	0.233	—	—	—
7	0.135	0.469	0.262	0.312	0.959	0.327	—	—
8	0.431	0.069	0.472	0.504	0.038	0.550	0.078	—
9	0.084	0.462	0.196	0.272	0.676	0.339	0.960	0.096

Note: 1 = Disconfirmation; 2 = Exhaustion; 3 = Dissatisfaction; 4 = Discontinuance Intention; 5 = Misinformation; 6 = Procrastination; 7 = Perceived Risk; 8 = SNS Embeddedness; 9 = Negative Social Exposure.

To evaluate common method bias, a full collinearity VIF test (Kock, 2015) was conducted to examine variance inflation factors across all latent constructs in the model. VIF values ranged from 1.583 to 2.465, well below the recommended threshold of 3.3 (Kock, 2015). These results indicate that CMB is unlikely to be a serious concern in this study.

Structural Model Assessment

All VIF values were below the threshold of 5 (maximum: 1.688), ruling out multicollinearity issues. The model explains 43.6% of the variance in dissatisfaction and 46.1% in discontinuance intention, indicating substantial explanatory power (Hair et al., 2011). The high R^2 values of the first-order dimensions of Perceived Risk—Negative Social Exposure (82.5%) and Misinformation (77.0%)—are consistent with the superordinate nature of the construct and confirm the adequacy of the second-order architecture.

Hypothesis Testing

Table 4 presents the structural model results with direct and indirect effects. All proposed hypotheses receive empirical support. Consistent with H1, procrastination reduces dissatisfaction with Facebook ($\beta = -0.093$, $p = 0.036$), indicating that the platform satisfies the procrastinating user's need for escapism. At the same time, H2 shows the positive direct effect of procrastination on discontinuance intention ($\beta = 0.142$, $p = 0.009$), capturing the user's self-regulatory response. Table 5 presents the ambivalent mediation: the indirect effect of procrastination on discontinuance through dissatisfaction is negative and significant ($\beta = -0.031$, $p = 0.048$), operating in the opposite direction to the direct effect. The total effect of procrastination on discontinuance is positive ($\beta = 0.111$), suggesting that the self-regulatory drive dominates over the buffering effect via dissatisfaction.

Regarding perceived risk, H3 and H4 show that it generates both dissatisfaction ($\beta = 0.238$, $p = 0.000$) and a direct discontinuance intention ($\beta = 0.114$, $p = 0.038$), following the dual pathway of ECT. The indirect effect of perceived risk on discontinuance through dissatisfaction is positive and significant ($\beta = 0.079$, $p = 0.000$), indicating partial mediation. Finally, H5 shows that dissatisfaction significantly predicts discontinuance intention ($\beta = 0.334$, $p = 0.000$), operating as the central mediator of the model.

Table 4. Structural model results — Direct effects

Type	Path	β	p-value	Result
H1	Procrastination → Dissatisfaction	-0.093	0.036	Supported
H2	Procrastination → Discontinuance Int.	0.142	0.009	Supported
H3	Perceived Risk → Dissatisfaction	0.238	0.000	Supported
H4	Perceived Risk → Discontinuance Int.	0.114	0.038	Supported
H5	Dissatisfaction → Discontinuance Int.	0.334	0.000	Supported
Dimensionality	Perceived Risk → Misinformation	0.878	0.000	—
Dimensionality	Perceived Risk → Neg. Social Exposure	0.908	0.000	—
Control	Disconfirmation → Dissatisfaction	0.596	0.000	—
Control	Exhaustion → Discontinuance Int.	0.145	0.002	—
Control	SNS Embeddedness → Discontinuance Int.	-0.410	0.000	—

Table 5. Indirect effects (via dissatisfaction)

Path	β	p-value
Disconfirmation → Discontinuance Int.	0.199	0.000
Procrastination → Discontinuance Int.	-0.031	0.048
Perceived Risk → Discontinuance Int.	0.079	0.000

Note: effects estimated via bootstrapping with 5,000 subsamples.

Discussion

This study examines the role of the dark side of Facebook—procrastination and perceived risk—as antecedents of dissatisfaction and discontinuance intention, using ECT as an organizing framework. The results provide empirical support for the proposed model and reveal a pattern of divergent effects between the two dark side dimensions that warrants detailed discussion.

Procrastination shows an ambivalent mediation pattern on discontinuance. On the one hand, it reduces dissatisfaction (H1 supported); on the other, it exerts a positive direct effect on discontinuance intention (H2 supported). This divergence is not theoretically inconsistent: the dual-path architecture of ECT (Bhattacharjee, 2001) allows its affective route, mediated by satisfaction, and its direct cognitive route to operate on distinct evaluative objects, and therefore to resolve in opposite directions for the same antecedent without contradiction. In the original ECT, the direct cognitive route is populated by a rational evaluation of the system (perceived usefulness). In the present study, when the belief is dark-side in nature, that same structural slot is occupied by a mechanism of a different psychological register: self-regulation (Carver & Scheier, 1982), which operates on the discrepancy between the user's own behavior and a higher-order personal standard, rather than on a system attribute. This divergence in the object of evaluation—the system, for the affective route; the self, for the direct cognitive route—explains why procrastination can simultaneously reduce dissatisfaction with the service while increasing discontinuance intention. Facebook effectively satisfies the procrastinating user's need for escapism, reducing dissatisfaction with the service (Meier et al., 2016; Van der Heijden, 2004); however, awareness of the procrastinating behavior simultaneously activates a self-regulatory response that drives discontinuance independently of that positive affective evaluation. The total effect of procrastination on discontinuance is positive ($\beta = 0.111$), indicating that the self-regulatory drive dominates over the buffering effect via dissatisfaction.

Perceived risk follows the dual pathway of ECT more clearly, generating dissatisfaction (H3 supported) and exerting an additional direct effect on discontinuance (H4 supported), with a significant indirect effect through dissatisfaction ($\beta = 0.079$, $p = 0.000$). This result is consistent with prior evidence identifying perceived risk as a driver of social network discontinuance (Huang et al., 2025; Marttila et al., 2021; Stieger

et al., 2013) and extends that finding by showing that the mechanism operates through both an affective pathway—via dissatisfaction—and a direct cognitive pathway. The conceptualization of perceived risk as a second-order superordinate construct, with Negative Social Exposure concern and Misinformation concern as underlying dimensions, receives empirical support from the high R^2 values of both dimensions (82.5% and 77.0%, respectively), supporting the adequacy of this architecture. Finally, dissatisfaction significantly predicts discontinuance intention (H5 supported, $\beta = 0.334$), consistent with ECT (Bhattacharjee, 2001) and prior SNS evidence (Bravo & Cuentas-Romero, 2025; Zhang et al., 2016).

This study makes three theoretical contributions to the SNS discontinuance literature. First, it shows that the dark side of Facebook does not constitute a monolithic block of effects on discontinuance: its dimensions operate through causally distinct mechanisms. Perceived risk and procrastination share their membership in the dark side spectrum but produce opposite effect patterns on dissatisfaction, which has direct implications for how the dark side is conceptualized and measured in future research. Second, the ambivalent mediation of procrastination is a novel finding that enriches the literature on dysfunctional social network use. Procrastination does not lead to discontinuance through dissatisfaction, but rather through an independent self-regulatory mechanism. This suggests that the procrastinating user exists in a state of cognitive ambivalence: the platform is positively valued affectively because it satisfies the need for escapism, yet the user recognizes the harm that such use produces and develops an intention to abandon it. From the perspective of Carver and Scheier (1982), this intention emerges when awareness of procrastinatory use signals a negative discrepancy with higher-order goals—such as productivity or self-control. When that discrepancy is sufficiently large, the user is motivated to adopt discontinuance as the most definitive corrective action available. This finding connects the discontinuance literature with that on self-regulation of technology behavior (Luqman et al., 2020; Nascimento et al., 2025; Turel, 2015).

Third, this study extends ECT to the domain of negative beliefs in the context of SNS discontinuance. Following the logic of Bhattacharjee (2001), who incorporated positive IS-specific beliefs beyond Oliver (2014) disconfirmation mechanism, this study shows that negative beliefs—procrastination and perceived risk—operate through the same channels but with signs determined by their confirmatory or disconfirmatory nature. Critically, the dual-path architecture of ECT admits, without theoretical inconsistency, that its direct cognitive route be populated by an evaluative mechanism external to ECT—self-regulation—when the belief in question concerns the user's own behavior rather than a system attribute. A single antecedent can thus be confirmatory for the system-directed affective route while simultaneously generating a self-referential discrepancy for the direct cognitive route, a pathway not previously modeled in the SNS discontinuance literature. This extension broadens the explanatory scope of ECT and opens a research agenda on the role of negative beliefs and of externally imported evaluative mechanisms in technology continuance and discontinuance models.

The results carry two practical implications for SNS providers. On the one hand, perceived risk—across its dimensions of Negative Social Exposure and misinformation concern—is the dark side predictor with the largest total effect on discontinuance. Providers should prioritize mechanisms that reduce threat perception on the platform: fake profile detection systems, content verification algorithms, and user-accessible privacy control tools. Such measures would act on both dissatisfaction and discontinuance intention simultaneously, maximizing their retention impact. On the other hand, the procrastination pattern reveals a paradox for providers: Facebook's design oriented toward immediate gratification and escapism retains procrastinating users effectively but simultaneously activates in them a self-regulatory response that drives discontinuance. Strategies promoting more mindful and controlled platform use—such as usage time management tools, activity summaries, or personal goal reminders—may reduce the self-regulatory component of discontinuance without sacrificing user satisfaction. Beyond these, SNS embeddedness is the strongest retention factor in the model. Dark side mitigation strategies will be most effective when combined with

features that deepen users' relational investment in the platform, such as tools that reinforce community ties or facilitate meaningful interactions.

Limitations and Future Research

This study presents three main limitations, each pointing to a specific direction for future research. First, the data correspond exclusively to U.S. Facebook users, which limits the generalizability of the results to other cultural contexts and platforms; future studies could replicate the model on other SNS such as Instagram or TikTok, where user profiles and dark side manifestations may differ. Second, data were collected through Amazon Mechanical Turk (MTurk); despite the data-quality safeguards applied, MTurk samples may differ from the broader population of Facebook users in usage patterns and demographic composition, and future research should replicate this model using probability-based or platform-native samples to assess the robustness of the observed patterns. Third, the cross-sectional design prevents establishing causal relationships in a strict sense; longitudinal studies would allow examination of how procrastination and perceived risk evolve across the user's lifecycle on the platform. Beyond these limitations, the ambivalent mediation of procrastination calls for further theoretical and empirical exploration to determine which of its two opposing mechanisms dominates under which conditions. The frameworks of hedonic use (Van der Heijden, 2004), self-regulation of technology behavior (Carver & Scheier, 1982; Luqman et al., 2020; Turel, 2015), and ECT (Bhattacharjee, 2001) offer a promising theoretical foundation that future research should extend by incorporating variables not yet examined in the SNS discontinuance context.

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References

- Ahmad, I. (2025, 2025/07/08). *Americans most eager to ditch Instagram, Facebook, and X, study finds*. Digital Information World. <https://www.digitalinformationworld.com/2025/07/americans-are-googling-how-to-quit-instagram-facebook-x-more-than-any-other-social-media-app.html>
- Akdim, K., Casaló, L. V., & Flavián, C. (2022). The role of utilitarian and hedonic aspects in the continuance intention to use social mobile apps. *Journal of Retailing and Consumer Services*, 66, 102888. <https://doi.org/10.1016/j.jretconser.2021.102888>
- Baccarella, C. V., Wagner, T. F., Kietzmann, J. H., & McCarthy, I. P. (2018). Social media? It's serious! Understanding the dark side of social media. *European Management Journal*, 36(4), 431-438.
- Baj-Rogowska, A. (2023). Antecedents and outcomes of social media fatigue. *Information Technology & People*, 36(8), 226-254. <https://doi.org/10.1108/itp-03-2022-0207>
- Bhatiasevi, V. (2024). The uses and gratifications of social media and their impact on social relationships and psychological well-being. *Frontiers in Psychiatry*, 15. <https://doi.org/10.3389/fpsy.2024.1260565>

- Bhattacharjee, A. (2001). Understanding information systems continuance: An expectation-confirmation model. *MIS Quarterly*, 25(3), 351-370. <https://doi.org/10.2307/3250921>
- Bhattacharjee, A., & Lin, C.-P. (2014). A unified model of IT continuance: Three complementary perspectives and crossover effects. *European Journal of Information Systems*, 24(4), 1-10. <https://doi.org/10.1057/ejis.2013.36>
- Boroon, L., Abedin, B., & Erfani, E. (2021). The Dark Side of Using Online Social Networks: A Review of Individuals' Negative Experiences. *Journal of Global Information Management (JGIM)*, 29(6), 1-21. <https://doi.org/10.4018/JGIM.20211101.0a34>
- Bravo, E. R., & Cuentas-Romero, A. G. (2023). Push and mooring factors to explain the discontinuance of social networks. *Issues In Information Systems*, 24, 294-303.
- Bravo, E. R., & Cuentas-Romero, A. G. (2025). Understanding social network discontinuance through the lens of turnover theory. *Issues In Information Systems*, 26(2).
- Bravo, E. R., & Libaque-Saenz, C. F. (2022). A multidimensional view of SNS usage: conceptualization and validation. *Asia Pacific Journal of Information Systems*, 32(3), 601-629.
- Carver, C. S., & Scheier, M. F. (1982). *Control theory: A useful conceptual framework for personality-social, clinical, and health psychology* [doi:10.1037/0033-2909.92.1.111]. American Psychological Association.
- Chang, C.-W., & Heo, J. (2014). Visiting theories that predict college students' self-disclosure on Facebook. *Computers in Human Behavior*, 30, 79-86. <https://doi.org/10.1016/j.chb.2013.07.059>
- Craker, N., & March, E. (2016). The dark side of Facebook®: The dark tetrad, negative social potency, and trolling behaviours. *Personality and individual differences*, 102, 79-84.
- Crossley, C. D., Bennett, R. J., Jex, S. M., & Burnfield, J. L. (2007). Development of a global measure of job embeddedness and integration into a traditional model of voluntary turnover. *Journal of applied Psychology*, 92(4), 1031-1042. <https://doi.org/10.1037/0021-9010.92.4.1031>
- Dang-Van, T., Thinh Truong, V., Nguyen, P.-T., Ming Wong, W., & Nguyen, N. (2024). Investigating users' discontinuous usage intention toward social networking sites: the roles of motivation and affectivity. *Online Information Review*, 48(6), 1103-1120. <https://doi.org/10.1108/oir-10-2023-0526>
- Davis, R. A., Flett, G. L., & Besser, A. (2002). Validation of a new scale for measuring problematic internet use: Implications for pre-employment screening. *Cyberpsychology & behavior*, 5(4), 331-345.
- Demetis, D. S. (2020). Breaking bad online: A synthesis of the darker sides of social networking sites. *European Management Journal*, 38(1), 33-44.
- Dhir, A., Talwar, S., Kaur, P., Budhiraja, S., & Islam, N. (2021). The dark side of social media: Stalking, online self-disclosure and problematic sleep. *International Journal of Consumer Studies*, 45(6), 1373-1391. <https://doi.org/10.1111/ijcs.12659>
- Dinu, V., Pelau, C., Lile, R., & Boghicevici, C. (2024). Pay or leave? The role of social media fatigue and willingness to pay to avoid fake news in social networks use. *Journal of Business Economics and Management*, 25(3), 516-530. <https://doi.org/10.3846/jbem.2024.21604>

- Dreßing, H., Bailer, J., Anders, A., Wagner, H., & Gallas, C. (2014). Cyberstalking in a large sample of social network users: Prevalence, characteristics, and impact upon victims. *Cyberpsychology, Behavior, and Social Networking*, 17(2), 61-67.
- Edwards, J. R. (2001). Multidimensional constructs in organizational behavior research: An integrative analytical framework. *Organizational research methods*, 4(2), 144-192.
- Feng, G. C., Su, X., & He, Y. (2024). A meta-analytical review of the determinants of social media discontinuance intentions. *Mass Communication and Society*, 27(3), 525-550.
- Fox, J., & Moreland, J. J. (2015). The dark side of social networking sites: An exploration of the relational and psychological stressors associated with Facebook use and affordances. *Computers in Human Behavior*, 45, 168-176.
- Fu, S., Li, H., & Liu, Y. (2021). Why discontinue Facebook usage? An empirical investigation based on a push–pull–mooring framework. *Industrial Management & Data Systems*, 121(11), 2318-2337. <https://doi.org/10.1108/imds-12-2020-0709>
- Fu, S., Li, H., Liu, Y., Pirkkalainen, H., & Salo, M. (2020). Social media overload, exhaustion, and use discontinuance: Examining the effects of information overload, system feature overload, and social overload. *Information Processing & Management*, 57(6), Article 102307. <https://doi.org/10.1016/j.ipm.2020.102307>
- Gohal, G., Alqassim, A., Eltyeb, E., Rayyani, A., Hakami, B., Al Faqih, A.,...Mahfouz, M. (2023). Prevalence and related risks of cyberbullying and its effects on adolescent. *BMC Psychiatry*, 23(1), 39. <https://doi.org/10.1186/s12888-023-04542-0>
- Hair, J. F., Hult, G., Ringle, C. M., & Sarstedt, M. (2022). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM) (Third Edition ed.)*. SAGE Publications, Inc.
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS SEM: Indeed a Silver Bullet. *Journal of Marketing Theory and Practice*, 19(2), 139-152. <https://doi.org/10.2753/MTP1069-6679190202>
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115-135. <https://doi.org/10.1007/s11747-014-0403-8>
- Huang, C.-K., Chen, C.-D., & Liu, Y.-T. (2019). To stay or not to stay? Discontinuance intention of gamification apps. *Information Technology & People*, 32(6), 1423-1445.
- Huang, Z., Palvia, P., & Mehta, N. (2025). The social media discontinuance model: the trio of dark side, regret, and privacy control. *Behaviour & Information Technology*, 44(3), 523-551. <https://doi.org/10.1080/0144929X.2024.2326551>
- Hulland, J. (1999). Use of partial least squares (PLS) in strategic management research: a review of four recent studies. *Strategic Management Journal*, 20(2), 195-204. [https://doi.org/https://doi.org/10.1002/\(SICI\)1097-0266\(199902\)20:2<195::AID-SMJ13>3.0.CO;2-7](https://doi.org/https://doi.org/10.1002/(SICI)1097-0266(199902)20:2<195::AID-SMJ13>3.0.CO;2-7)
- Kock, N. (2015). Common Method Bias in PLS-SEM: A Full Collinearity Assessment Approach. *International Journal of e-Collaboration (IJeC)*, 11(4), 1-10. <https://doi.org/10.4018/ijec.2015100101>
- Le, D.-H., & Dao, P. Q. (2024). Exploring the emotional pathway from motivation to Facebook addiction in a Vietnamese undergraduate sample. *Psychology in Russia: State of the art*, 17(1), 100-115.

- Lian, S.-l., Sun, X.-j., Zhou, Z.-k., Fan, C.-y., Niu, G.-f., & Liu, Q.-q. (2018). Social networking site addiction and undergraduate students' irrational procrastination: The mediating role of social networking site fatigue and the moderating role of effortful control. *PloS one*, 13(12), Article e0208162.
- Lin, T.-C., Wu, S., Hsu, J. S.-C., & Chou, Y.-C. (2012). The integration of value-based adoption and expectation–confirmation models: An example of IPTV continuance intention. *Decision Support Systems*, 54(1), 63-75.
- Lowry, P. B., D'Arcy, J., Hammer, B., & Moody, G. D. (2016). “Cargo Cult” science in traditional organization and information systems survey research: A case for using nontraditional methods of data collection, including Mechanical Turk and online panels. *Journal of Strategic Information Systems*, 25(3), 232-240.
<https://doi.org/10.1016/j.jsis.2016.06.002>
- Luqman, A., Cao, X., Ali, A., Masood, A., & Yu, L. (2017). Empirical investigation of Facebook discontinues usage intentions based on SOR paradigm. *Computers in Human Behavior*, 70, 544-555.
<https://doi.org/10.1016/j.chb.2017.01.020>
- Luqman, A., Masood, A., Weng, Q., Ali, A., & Rasheed, M. I. (2020). Linking Excessive SNS Use, Technological Friction, Strain, and Discontinuance: The Moderating Role of Guilt. *Information Systems Management*, 37(2), 94-112. <https://doi.org/10.1080/10580530.2020.1732527>
- Maier, C., Laumer, S., Eckhardt, A., & Weitzel, T. (2015). Giving too much social support: Social overload on social networking sites. *European Journal of Information Systems*, 24(5), 447-464.
<https://doi.org/10.1057/ejis.2014.3>
- Maier, C., Laumer, S., Weinert, C., & Weitzel, T. (2015). The effects of technostress and switching stress on discontinued use of social networking services: A study of Facebook use. *Information Systems Journal*, 25(3), 275-308. <https://doi.org/10.1111/isj.12068>
- Marttila, E., Koivula, A., & Räsänen, P. (2021). Cybercrime Victimization and Problematic Social Media Use: Findings from a Nationally Representative Panel Study. *American Journal of Criminal Justice*, 46(6), 862-881. <https://doi.org/10.1007/s12103-021-09665-2>
- Masood, A., Luqman, A., Feng, Y., & Shahzad, F. (2022). Untangling the Adverse Effect of SNS Stressors on Academic Performance and Its Impact on Students' Social Media Discontinuation Intention: The Moderating Role of Guilt. *Sage Open*, 12(1), 21582440221079905.
<https://doi.org/10.1177/21582440221079905>
- Meier, A., Reinecke, L., & Meltzer, C. E. (2016). Facebocrastination? Predictors of using Facebook for procrastination and its effects on students' well-being. *Computers in Human Behavior*, 64, 65-76.
<https://doi.org/10.1016/j.chb.2016.06.011>
- Meltwater. (2026). *Digital 2026 Mid-Year Global Update Report*. <https://datareportal.com/reports/digital-2026-mid-year-global-update-report>
- Meta. (2018). *Facebook reports fourth quarter and full year 2017 results*. <https://investor.atmeta.com/investor-news/press-release-details/2018/Facebook-Reports-Fourth-Quarter-and-Full-Year-2017-Results/default.aspx>
- Meta. (2019). *Facebook reports fourth quarter and full year 2018 results*. <https://investor.atmeta.com/investor-news/press-release-details/2019/Facebook-Reports-Fourth-Quarter-and-Full-Year-2018-Results/default.aspx>

- Meta. (2024). *Meta reports fourth quarter and full year 2023 results and initiates quarterly dividend*. <https://investor.atmeta.com/investor-news/press-release-details/2024/Meta-Reports-Fourth-Quarter-and-Full-Year-2023-Results-Initiates-Quarterly-Dividend/>
- Molok, N. N. A., Chang, S., & Ahmad, A. (2010). Information leakage through online social networking: Opening the doorway for advanced persistence threats. Proceedings of the 8th Australian Information Security Management Conference, Perth, WA, Australia.
- Nascimento, P., Oliveira, T., & Neves, J. (2025). Beyond the screen: Exploring pathways to reduce SNS dependency. *Telematics and Informatics*, 97, 102224. <https://doi.org/10.1016/j.tele.2024.102224>
- Niu, J., Mazhar, B., Haq, I. U., & Maqsood, F. (2024). Protecting Privacy on Social Media: Mitigating Cyberbullying and Data Heist Through Regulated Use and Detox, with a Mediating Role of Privacy Safety Motivations. *Social Media + Society*, 10(4), 20563051241306331. <https://doi.org/10.1177/20563051241306331>
- Oliver, R. L. (2014). *Satisfaction: A behavioral perspective on the consumer: A behavioral perspective on the consumer* (2nd ed.). Routledge.
- Pew Research Center. (2025a). *Social media fact sheet*. <https://www.pewresearch.org/internet/fact-sheet/social-media/>
- Pew Research Center. (2025b). *Teens, social media and AI chatbots 2025*. <https://www.pewresearch.org/internet/2025/12/09/teens-social-media-and-ai-chatbots-2025/>
- Podsakoff, P. M., MacKenzie, S. B., & Podsakoff, N. P. (2012). Sources of method bias in social science research and recommendations on how to control it. *Annual review of psychology*, 63, 539-569. <https://doi.org/10.1146/annurev-psych-120710-100452>
- Pradhan, S. (2022). Social network fatigue: revisiting the antecedents and consequences. *Online Information Review*, 46(6), 1115-1131. <https://doi.org/10.1108/oir-10-2020-0474>
- Przepiorka, A., Blachnio, A., & Cudo, A. (2023). Procrastination and problematic new media use: the mediating role of future anxiety. *Current Psychology*, 42(7), 5169-5177. <https://doi.org/10.1007/s12144-021-01773-w>
- Ringle, C. M., Wende, S., & Becker, J.-M. (2024). *SmartPLS 4*. In SmartPLS. <https://www.smartpls.com>
- Rossiter, J. R. (2002). The C-OAR-SE procedure for scale development in marketing. *International Journal of Research in Marketing*, 19(4), 305-335.
- Saeri, A. K., Ogilvie, C., La Macchia, S. T., Smith, J. R., & Louis, W. R. (2014). Predicting Facebook users' online privacy protection: Risk, trust, norm focus theory, and the theory of planned behavior. *The Journal of social psychology*, 154(4), 352-369.
- Sahoo, M. B., Janardhanan, N. S., & Ekkirala, S. (2024). Team Ties, Embeddedness, and Turnover Intentions: Integrating Social Networks and Field Theory. *Small Group Research*, 55(3), 417-456. <https://doi.org/10.1177/10464964231195101>
- Sarstedt, M., Hair Jr, J. F., Cheah, J.-H., Becker, J.-M., & Ringle, C. M. (2019). How to specify, estimate, and validate higher-order constructs in PLS-SEM. *Australasian marketing journal*, 27(3), 197-211.
- Schmiege, S. J., Bryan, A., & Klein, W. M. (2009). Distinctions between worry and perceived risk in the context of the theory of planned behavior. *Journal of Applied Social Psychology*, 39(1), 95-119.

- Schuster, A. M., Cotten, S. R., & Meshi, D. (2023). Established Adults, Who Self-Identify as Smartphone and/or Social Media Overusers, Struggle to Balance Smartphone Use for Personal and Work Purposes. *Journal of Adult Development*, 30(1), 78-89. <https://doi.org/10.1007/s10804-022-09426-3>
- Sirois, F., & Pychyl, T. (2013). Procrastination and the priority of short-term mood regulation: Consequences for future self. *Social and Personality Psychology Compass*, 7(2), 115-127. <https://doi.org/10.1111/spc3.12011>
- Stangl, F. J., Riedl, R., Kiemeswenger, R., & Montag, C. (2023). Negative psychological and physiological effects of social networking site use: The example of Facebook. *Frontiers in Psychology*, 14. <https://doi.org/10.3389/fpsyg.2023.1141663>
- Steel, P. (2007). The nature of procrastination: A meta-analytic and theoretical review of quintessential self-regulatory failure. *Psychological bulletin*, 133(1), 65-94. <https://doi.org/10.1037/0033-2909.133.1.65>
- Stieger, S., Burger, C., Bohn, M., & Voracek, M. (2013). Who commits virtual identity suicide? Differences in privacy concerns, internet addiction, and personality between Facebook users and quitters. *Cyberpsychology, Behavior, and Social Networking*, 16(9), 629-634.
- Sümer, C., & Büttner, O. B. (2022). I'll Do It – After One More Scroll: The Effects of Boredom Proneness, Self-Control, and Impulsivity on Online Procrastination. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.918306>
- Turel, O. (2015). Quitting the use of a habituated hedonic information system: a theoretical model and empirical examination of Facebook users. *European Journal of Information Systems*, 24(4), 431-446. <https://doi.org/10.1057/ejis.2014.19>
- Van der Heijden, H. (2004). User acceptance of hedonic information systems. *MIS Quarterly*, 28(4), 695-704.
- Vishwanath, A., Harrison, B., & Ng, Y. J. (2018). Suspicion, cognition, and automaticity model of phishing susceptibility. *Communication Research*, 45(8), 1146-1166.
- Xie, W., & Karan, K. (2019). Consumers' privacy concern and privacy protection on social network sites in the era of big data: Empirical evidence from college students. *Journal of Interactive Advertising*, 19(3), 187-201.
- Zerres, C., & Breyer-Mayländer, T. (2024). The dark side of social media: Systematization and overview. *The Journal of Social Media in Society*, 13(2), 175-200.
- Zhang, S., Zhao, L., Lu, Y., & Yang, J. (2016). Do you get tired of socializing? An empirical explanation of discontinuous usage behaviour in social network services. *Information & Management*, 53(7), 904-914. <https://doi.org/10.1016/j.im.2016.03.006>