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# Fail to Win: How Schadenfreude and Competitive Traits Predict Download Intention in Mobile Game Fail Ads

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## ABSTRACT

In mobile game advertising, failure-depicting advertisements, which intentionally showcase unsuccessful gameplay scenarios, have emerged as an unexpectedly effective promotional strategy. This study examines the psychological mechanisms underlying the effectiveness of fail advertisements, with particular attention to the emotional response of schadenfreude and the influence of individual differences in competitiveness. Drawing on prior research on schadenfreude and Trait Activation Theory, we propose that schadenfreude experienced in response to fail ads is positively related to individual competitiveness and is, in turn, associated with higher download intention. We conducted two vignette-based experimental studies to test this theoretical framework. Study 1 ( $N = 241$ ) demonstrates that hypercompetitiveness predicts schadenfreude, which in turn impacts download intention, while general competitiveness only influences schadenfreude indirectly through hypercompetitiveness. Study 2 ( $N = 247$ ) extends these findings by showing that perceived game difficulty moderates the experience of schadenfreude, such that failures occurring in reasonably challenging scenarios are associated with greater schadenfreude than those in extremely difficult ones. These findings contribute to the literature on the impact of schadenfreude and individual competitiveness on consumer responses. Marketers can enhance ad effectiveness by calibrating difficulty and targeting hypercompetitive consumers with fail-based narratives.

## 1 | Introduction

Recent years have seen a rise in mobile game advertisements intentionally highlighting unsuccessful gameplay, with prominent examples including games such as “Homescapes,” “Gardenscapes,” and “Hero Wars.” These advertisements typically show characters repeatedly failing straightforward tasks or making obvious mistakes. Despite the apparent paradox of promoting games through failure, this format, known as fail advertising (hereafter ‘fail ads’), has become increasingly prevalent. Industry data reveals that fail ads accounted for over 25% of top-performing mobile game advertisements in 2022 (AppLovin 2023). Experimental findings by Ashouri et al.

(2025) further support this trend, showing that fail ads outperform success-oriented ads in fostering gameplay enjoyment and user engagement, potentially enhancing retention rates. However, despite growing interest in fail ads, existing research has mostly focused on performance outcomes by comparing the effectiveness of fail ads with that of success-oriented ads (e.g., Ashouri et al. 2025; Luan and Li 2022), leaving the emotional reactions underlying these outcomes largely unexplored. This gap is significant, considering that emotional responses play a critical mediating role in the effectiveness of advertising (Holbrook and Batra 1987). Accordingly, a mechanism-based account of the emotions elicited by fail ads is needed to explain why this counterintuitive format can be persuasive.

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Addressing this gap, the current study posits that *schadenfreude*, the pleasure derived from witnessing others' misfortunes (Feather and Sherman 2002), is central to understanding consumer responses to fail ads. Fail ads repeatedly portray failures, naturally inducing social comparison processes that evoke *schadenfreude*. Prior consumer research indicates that *schadenfreude* positively influences purchase intentions, willingness to pay, and post-purchase satisfaction when others' failures are salient (Marticotte and Arcand 2017; Moisieiev et al. 2020; Yucel-Aybat and Kramer 2018). Thus, this research positions *schadenfreude* as a mediating emotional mechanism connecting exposure to fail ads with consumer outcomes, advancing theoretical insights into emotion-driven persuasion within failure-oriented advertising contexts. This focus helps clarify the emotional mechanism through which failure-based content is associated with downstream consumer outcomes.

While *schadenfreude* offers a compelling explanation for the appeal of fail ads, fully understanding this phenomenon necessitates examining individual traits influencing susceptibility to such emotional responses. Specifically, competitiveness emerges as a critical dispositional factor. Fail ads frequently integrate competitive cues, such as time constraints, scoring systems, and clearly defined success-failure scenarios. According to trait activation theory (Tett and Burnett 2003), such situational cues can activate relevant dispositional traits. Consequently, fail ads represent psychologically salient stimuli capable of triggering competitive dispositions. General competitiveness, defined as an intrinsic motivation to engage in competition and outperform others (Helmreich and Spence 1978; Swab and Johnson 2019), could intuitively predispose highly competitive individuals toward experiencing pleasure from observing others' failures. However, empirical research on this relationship has yielded inconsistent results (e.g., Phillips-Melancon and Dalakas 2014; Yucel-Aybat and Kramer 2018). Such inconsistencies point out a theoretical gap warranting deeper exploration, particularly regarding the relationship between competitiveness and *schadenfreude*. This mixed evidence calls for an explanation that specifies when and why general competitiveness is more likely to translate into *schadenfreude*. In response, we focus on hypercompetitiveness, an intense form of competitiveness characterized by an extreme desire to win at any cost (Ryckman et al. 1990). Although direct empirical evidence linking hypercompetitiveness to *schadenfreude* is limited, their shared psychological foundations suggest that hypercompetitive individuals, driven by a need to affirm self-worth through dominance (Ryckman et al. 1997), are likely predisposed to *schadenfreude*. Therefore, we investigate hypercompetitiveness as an additional predictor of *schadenfreude* and explore its potential role as a psychological pathway connecting general competitiveness and *schadenfreude*.

The primary objective of this study is to clarify how general competitiveness relates to *schadenfreude* by identifying hypercompetitiveness as a critical underlying mechanism. In particular, we examine whether hypercompetitiveness provides a pathway through which general competitiveness is expressed as *schadenfreude*, thereby helping to explain mixed evidence on the general competitiveness to *schadenfreude* association. We then assess whether *schadenfreude* is associated with consumers' download intentions in mobile game fail ads. To

empirically test our research model, we conducted two vignette-based studies and a supplementary experiment, using Partial Least Squares (PLS) modeling (Ringle et al. 2024). Study 1 establishes the fundamental relationships between competitive traits, *schadenfreude*, and download intentions. Study 2 extends this framework by examining whether perceived game difficulty, which can signal that failure is more deserved, conditions when general competitiveness is more likely to translate into *schadenfreude*. In the mobile game advertising context, such cues often take the form of difficulty claims such as "95% fail this level" or depictions of overwhelming obstacles, which may shape viewers' attributions about the deservingness of failure. Building on this, we incorporate perceived game difficulty as a contextual cue of failure deservingness and estimate an integrated process model linking general competitiveness and hypercompetitiveness to *schadenfreude*. Finally, we include a supplementary experiment that removes explicit failure cues while keeping the gameplay demonstration otherwise comparable, allowing us to assess whether the proposed emotional pathway is specific to failure-based content rather than to general positive reactions to the advertisement.

This study contributes to both theory and practice by highlighting *schadenfreude* as a key emotional mechanism driving consumer interest in mobile game fail ads. It further clarifies the distinct roles of general competitiveness and hypercompetitiveness, emphasizing the latter as a crucial predictor and mediator of *schadenfreude*. Additionally, the study identifies perceived game difficulty as an important boundary condition, with moderate difficulty enhancing *schadenfreude* more effectively than extreme difficulty. These insights suggest that marketers can strategically utilize moderate difficulty scenarios in fail ads to maximize emotional engagement and consumer interest. Recognizing hypercompetitiveness as a key trait also enables advertisers to more effectively target competitive individuals by emphasizing competitive cues in their advertisements. This study now turns to the theoretical foundations of *schadenfreude* and individual competitiveness underlying our conceptual framework.

## 2 | Theoretical Background

### 2.1 | Schadenfreude in Consumer Response

*Schadenfreude*, the pleasure experienced from another's misfortune, has received extensive attention across various psychological fields, including moral psychology (Feather and Nairn 2005), social identity (Leach et al. 2003), and personality research (Erzi 2020). Prior research suggests that *schadenfreude* originates from perceptions of deservingness, intergroup relations, and individual differences (Feather and Sherman 2002; Leach et al. 2003; James et al. 2014). Deservingness theory (Feather and Sherman 2002) contends that individuals experience stronger *schadenfreude* when misfortunes are viewed as justified. This claim is supported by empirical findings showing that *schadenfreude* is heightened when victims are perceived as responsible for their failures (Van Dijk et al. 2005). Similarly, *schadenfreude* intensifies within competitive intergroup contexts, with individuals experiencing greater satisfaction from the failures of out-group members (Cikara et al. 2011; Leach et al. 2003). Individual differences, such as narcissism,

Machiavellianism, and psychopathy, collectively known as the Dark Triad, are also associated with elevated levels of schadenfreude (Erzi 2020; James et al. 2014; Porter et al. 2014). These studies suggest that schadenfreude is an emotional response influenced by both situational and dispositional factors.

In marketing contexts, schadenfreude impacts consumer attitudes and behaviors. For example, Moisieiev et al. (2020) found that consumers experiencing schadenfreude after observing someone else's poor purchasing decisions tend to report higher satisfaction with their own choices, even in unrelated buying situations. Within brand rivalry scenarios, loyal consumers often experience pleasure from competitors' failures, strengthening their brand loyalty and enhancing group identity (Phillips-Melancon and Dalakas 2014). Schadenfreude also emerges in consumer responses to counterfeit and imitation products. Marticotte and Arcand (2017) found that schadenfreude directed toward luxury brands leads to more favorable attitudes and increased purchase intentions toward counterfeit products. Loebnitz and Grunert (2019) reported similar findings, noting that imitation products of global brands evoke stronger schadenfreude than those of local brands, thereby raising purchase intentions. Furthermore, comparative advertising featuring inferior brands failing can evoke schadenfreude, enhancing consumer willingness to pay for the advertised superior brand (Yucel-Aybat and Kramer 2018).

Collectively, these studies indicate that schadenfreude is a socially embedded emotion influenced by perceived deservingness, intergroup dynamics, and individual personality characteristics. In the context of fail ads, depictions of incompetence can make the failure appear deserved, thereby strengthening the basis for schadenfreude. At the same time, fail ads can prompt social comparison by highlighting viewers' relative competence, fostering feelings of superiority. Building upon this theoretical foundation, the current study examines the role of schadenfreude as a psychological driver in fail ads, proposing that it enhances consumers' intention to download the game.

## 2.2 | Individual Competitiveness

Research on competitiveness distinguishes between a general disposition to compete and more specific competitive orientations that shape how individuals approach competitive situations (Fezzey and Swab 2024). General competitiveness, known as trait competitiveness, refers to a stable disposition toward engaging in competition and striving to outperform others (Helmreich and Spence 1978; Swab and Johnson 2019). It captures individuals' general willingness to enter competitive situations, but does not specify the motives that drive competition or the attitudes individuals display once they are actively competing (Orosz et al. 2018; Swab et al. 2024). Competitive orientations address this motivational layer by focusing on how individuals interpret and engage in competition (Ryckman et al. 1990; Ryckman et al. 1996; Ryckman et al. 2009; Swab et al. 2024). For example, personal development competitiveness reflects a focus on self-improvement, whereas competition avoidance reflects anxiety-driven disengagement from competitive situations (Orosz et al. 2018; Ryckman et al. 1996; Ryckman et al. 2009). Among these orientations,

hypercompetitiveness has a well-established conceptual basis. Rooted in Horney's interpersonal theory, hypercompetitiveness reflects an insecurity-driven need to assert superiority over others and is characterized by a strong desire to win, heightened threat sensitivity, and self-worth that is contingent on winning (Horney 1937; Ryckman et al. 1990). Thus, whereas general competitiveness captures a broad inclination to engage in competitive activities, hypercompetitiveness reflects a particular motivational pattern that guides how individuals understand competitive situations and the attitudes they adopt while competing.

Empirical evidence supports treating these as distinct constructs rather than as points on a continuum. First, research on interpersonal dispositions shows that hypercompetitiveness, but not general competitiveness, is embedded in darker interpersonal profiles such as Machiavellianism, suggesting that the two constructs occupy different nomological networks (Houston et al. 2015). Second, psychometric validation studies indicate that general competitiveness and dominant competitiveness, a construct used to capture a hypercompetitive orientation, loaded on separate factors with low correlations, confirming their separation at the measurement level (Newby and Klein 2014). Third, in applied settings, it was shown that dominant competitiveness predicted problematic gaming behavior, while general competitiveness did not (Harris et al. 2022). Collectively, these conceptual and empirical patterns indicate that hypercompetitiveness is not merely a high-intensity endpoint of general competitiveness. It denotes a specific, maladaptive motive organized around enhancing self-worth through victory at nearly any cost. This orientation is marked by a preoccupation with winning and a pronounced desire for superiority that shape individuals' motives, interpretations, and conduct in competitive encounters (Ryckman et al. 1990).

Although prior research has established that general competitiveness and hypercompetitiveness are conceptually separable, little attention has been paid to how they are connected and why this distinction matters for consumer responses. Prior evidence indicates that general competitiveness is positively associated with hypercompetitive attitudes, but offers limited insight into the conditions under which this linkage becomes consequential for downstream outcomes. Houston et al. (2015) found that general trait competitiveness predicts hypercompetitive attitudes, suggesting that individuals who are more inclined to engage in competition are also more likely to adopt a win-at-all-costs orientation. Similarly, Swab et al. (2024) confirmed that higher general competitiveness is associated with stronger hypercompetitive attitudes, particularly among individuals with lower core self-evaluations. They also emphasize that competitive orientations can be sensitive to situational features, which may shape when competitive motivation takes a more extreme form. What remains unclear is how a general competitive disposition is channeled into a more extreme win-at-all-costs orientation in ways that systematically engage emotional and behavioral pathways. Building on this work, we treat hypercompetitiveness as a motivational mechanism through which general competitiveness is manifested in evaluative settings. This perspective shifts attention from merely distinguishing competitiveness traits to explaining how a broad competitive disposition is expressed through specific

orientations that guide consumer responses. In the next section, we draw on Trait Activation Theory to explain how this mechanism gives rise to *schadenfreude* in the context of fail ads.

### 2.3 | Competitiveness and *Schadenfreude* in Fail Ads

Previous research has consistently indicated that *schadenfreude* intensifies within competitive contexts, such as sports competitions, intergroup rivalries, and performance-based scenarios (Dalakas and Phillips Melancon 2012; Leach et al. 2003). These studies highlight how competitive tension amplifies the enjoyment derived from observing others' failures. Nevertheless, findings regarding the relationship between individual competitiveness and *schadenfreude* have been inconsistent, suggesting that the nature and explicitness of competitive cues may be pivotal. For instance, Phillips-Melancon and Dalakas (2014) found no significant relationship between general competitiveness and *schadenfreude* in brand rivalry contexts where competitive cues were indirect or symbolic (e.g., asking Apple users if they wanted Microsoft to fail). In contrast, Yucel-Aybat and Kramer (2018) observed a positive relationship between higher competitiveness and *schadenfreude* in comparative advertising contexts that explicitly showcased direct brand competition, particularly when the competitor's failure was seen as justified.

Trait Activation Theory (Tett and Burnett 2003) provides a valuable framework for interpreting these contrasting results, positing that personality traits are activated when environmental cues align closely with those traits. Fail ads contain explicit competitive elements, such as success-failure contrasts, rankings, time pressure, and challenge statements (e.g., 'Only 5% can win'), which could activate competitive dispositions. Consistent with this view, prior research shows that leaderboards and points-based gamification successfully heighten engagement and enjoyment among competitive individuals (Amo et al. 2020; Höllig et al. 2020). In addition, research on *schadenfreude* demonstrates that explicit rivalry and competitive framing amplify pleasure derived from others' failures (Dalakas and Phillips Melancon 2012; Leach et al. 2003; Yucel-Aybat and Kramer 2018). Taken together, these patterns suggest that when individuals with higher trait competitiveness encounter fail ads saturated with competitive cues, their broad enjoyment of competition is likely to be activated as a hypercompetitive, win-lose appraisal of the performance. This cue-triggered appraisal, in turn, makes the depicted failure especially gratifying, providing a mechanism through which individual competitiveness can foster *schadenfreude* in responses to fail ads. As summarized in Table 1, previous research has explored various facets of competitiveness and *schadenfreude*, highlighting the relationships between these constructs across different contexts. Based on this account, our research explores the influence of competitiveness traits, specifically general competitiveness and hypercompetitiveness, on *schadenfreude* responses to fail ads.

## 3 | Hypothesis Development

### 3.1 | *Schadenfreude* in Response to Fail Ads

*Schadenfreude*, the pleasure derived from observing others' misfortunes, can function as an essential psychological

mechanism influencing consumer responses to fail ads. Fail ads typically portray exaggerated or humorous gameplay errors, offering viewers opportunities for upward social comparison and the amusement stemming from others' failures, which are key components of *schadenfreude*. Previous studies indicate that *schadenfreude* in different marketing contexts can heighten consumer satisfaction (Moiseiev et al. 2020), enhance brand loyalty within competitive brand rivalries (Phillips-Melancon and Dalakas 2014), and increase willingness to pay for brands when comparative ads show the shortcomings of competitors (Yucel-Aybat and Kramer 2018). These examples illustrate how *schadenfreude* positively influences consumer reactions in comparative and competitive contexts. By converting depicted failures into emotionally gratifying experiences, *schadenfreude* likely makes fail ads more enjoyable and encourages viewers to perceive the advertised game as more entertaining, ultimately boosting their intention to download. Therefore, we propose that *schadenfreude* triggered by fail ads will positively influence download intentions by turning observed failures into emotionally satisfying experiences.

**H1.** *Schadenfreude* is positively related to download intention in response to mobile game fail ads.

### 3.2 | Linking *Schadenfreude* and General Competitiveness

General competitiveness is a stable individual difference defined by a strong desire to outperform others and a preference for engaging in competitive scenarios (Helmreich and Spence 1978; Swab and Johnson 2019). Individuals who exhibit high levels of competitiveness may derive greater pleasure from observing others' failures, especially when competition is clearly evident. Previous studies have found that competitiveness enhances *schadenfreude* specifically within contexts that explicitly highlight competition. For example, Dalakas and Phillips Melancon (2012) reported that sports fans who highly valued winning experienced greater *schadenfreude*, while Yucel-Aybat and Kramer (2018) identified that trait competitiveness intensified feelings of *schadenfreude* during exposure to comparative advertising. Given that fail ads frequently accentuate competitive elements, it is reasonable to expect that individuals who are generally more competitive will experience increased *schadenfreude* upon viewing these ads. Thus, we propose that general competitiveness will positively impact *schadenfreude* in response to fail ads.

**H2.** *General competitiveness* is positively related to *schadenfreude*.

### 3.3 | Linking *Schadenfreude* and Hypercompetitiveness

Hypercompetitiveness refers to an intense and maladaptive competitive orientation, characterized by a compulsive drive to win at all costs as a means of enhancing or protecting self-worth (Ryckman et al. 1990). Highly hypercompetitive individuals often perceive social interactions as zero-sum scenarios, wherein another individual's loss directly translates into their own gain (Yoon et al. 2020). This worldview implies that witnessing others' failures may serve as symbolic victories, providing satisfaction and amusement, both central elements of

**TABLE 1** | Literature review on competitive dispositions and schadenfreude.

<b>Study</b>	<b>Context</b>	<b>Antecedents</b>	<b>Outcome</b>	<b>Key findings</b>
Sundie et al. (2009)	Status product failure	Target status, Flaunting, Envy, Hostility	Word of mouth, Brand affect, Brand attitude	Status product failure evokes schadenfreude, which increases intentions to spread negative word of mouth and lowers evaluations of the brand. Envy operates as a precursor to schadenfreude by giving rise to hostile reactions toward the status product owner.
Phillips-Melancon and Dalakas (2014)	Brand rivalry	Brand identification, Trait competitiveness	Schadenfreude toward rival brand	Brand identification with Apple increases schadenfreude towards Microsoft. Trait competitiveness does not mediate this relationship.
Marticotte and Arcand (2017)	Counterfeit luxury	Attitude toward original brand, Similarity perception	Counterfeit purchase intention	Schadenfreude toward a luxury brand's misfortune increases counterfeit purchase intention and mediates the influence of brand attitude toward original brand and perceived similarity between genuine and counterfeit products.
Yucel-Aybat and Kramer (2018)	Comparative ads	Trait competitiveness, Deservingness	Brand attitude, Willingness to pay	Competitive consumers report higher schadenfreude in comparative ads with deserving failures, which boosts brand attitude and willingness to pay.
Moisieiev et al. (2020)	Observing failed purchase	Observing another consumer's bad purchase	Choice satisfaction	Schadenfreude from observing another consumer's failed purchase increases satisfaction with one's own choice.
Current study	Mobile game fail ads	General competitiveness, hypercompetitiveness, perceived game difficulty	Download intention	Schadenfreude elicited by fail ads increases download intention. Hypercompetitiveness directly heightens schadenfreude, while general competitiveness shapes schadenfreude indirectly through hypercompetitiveness, ultimately increasing download intention. Extreme game difficulty diminishes the intensity of these responses.

schadenfreude. While empirical research directly linking hypercompetitiveness to schadenfreude remains sparse, hypercompetitiveness consistently correlates with aggressive and hostile behaviors in competitive situations (Ryckman et al. 1997; Yoon et al. 2020). Additionally, hypercompetitiveness is linked to personality traits, such as narcissism and Machiavellianism (Houston et al. 2015; Luchner et al. 2011), which have independently influenced schadenfreude in previous studies (James et al. 2014; Erzi 2020). Taken together, these findings suggest that witnessing repeated incompetence or failure may resonate strongly with hypercompetitive individuals' internal need for dominance and superiority, leading to feelings of satisfaction and amusement. Following this, we propose that hypercompetitiveness will positively affect schadenfreude in response to mobile game fail ads.

**H3.** *Hypercompetitiveness is positively related to schadenfreude.*

### 3.4 | Mediating Role of Hypercompetitiveness

General competitiveness describes a broad and stable inclination toward competition, whereas hypercompetitiveness denotes an intense, outcome-driven attitude to win regardless of the costs. Building upon this distinction, we suggest that hypercompetitiveness acts as a psychological intermediary linking general competitiveness to schadenfreude. Although individuals high in general competitiveness may be more attentive to competitive outcomes, this tendency alone does not fully explain why they would experience pleasure at another person's failure. This connection can be seen more clearly when hypercompetitiveness is introduced as an intervening mindset. Hypercompetitiveness captures a dominance-oriented way of engaging in competition, in which interpersonal situations are evaluated primarily in terms of winning and losing. It thus provides a motivational lens through which a broad enjoyment of competition is expressed in concrete situations. When general competitiveness is channeled into a hypercompetitive orientation, individuals are more likely to interpret others' setbacks as opportunities to affirm relative advantage. In this way, hypercompetitiveness can intensify and direct general competitive tendencies toward experiencing schadenfreude at another person's misfortune. Prior work supports this linkage by showing that higher general competitiveness is associated with stronger hypercompetitive attitudes, indicating that broad competitive tendencies can develop into a more dominance-focused orientation (Swab et al. 2024). Thus, we propose a serial mediation model where general competitiveness leads to hypercompetitiveness, which subsequently enhances schadenfreude. Additionally, we posit that general competitiveness affects download intentions through a sequential pathway, whereby heightened hypercompetitiveness increases schadenfreude, ultimately raising consumers' intention to download.

**H4.** *Hypercompetitiveness mediates the relationship between general competitiveness and schadenfreude.*

**H5.** *Hypercompetitiveness and schadenfreude mediate the relationship between general competitiveness and download intention.*

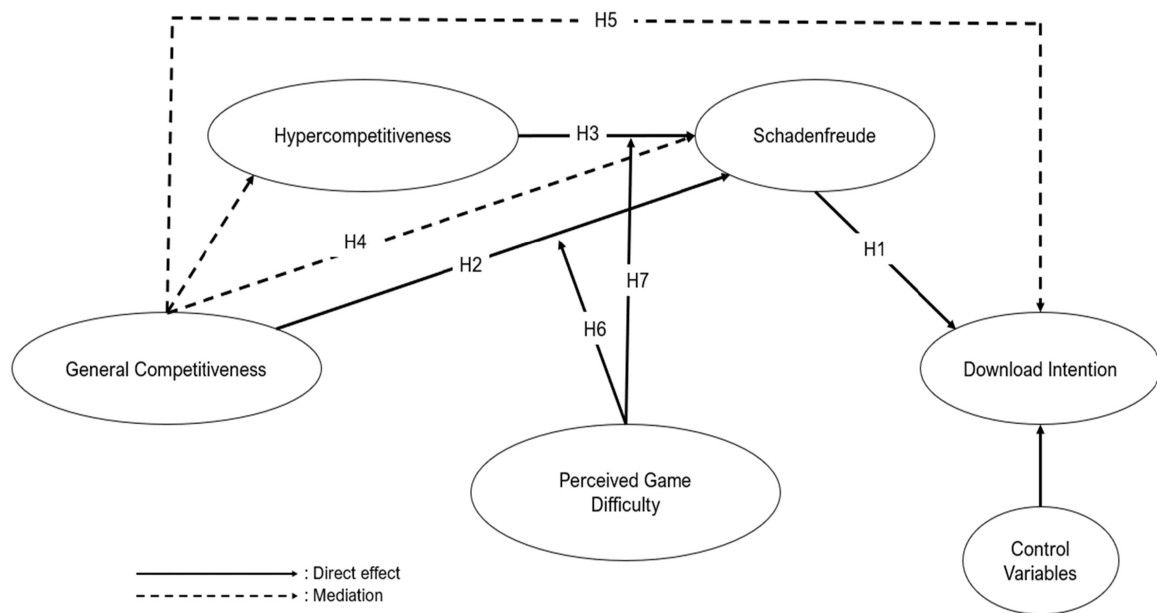
### 3.5 | Moderating Role of Game Difficulty

Mobile game advertisements, such as those for Fishdom (Playrix), often include statements, such as "95% fail this," suggesting that tasks are exceptionally challenging. Likewise, ads for "Last War: Survival Game (FunFly Pte. Ltd)" frequently portray scenarios where players face overwhelming enemy forces, creating a sense of inevitable defeat. Such advertising approaches implicitly shape viewers' perceptions of game difficulty, potentially influencing their motivation to engage with the games. Within this framework, we propose that perceived game difficulty moderates the relationship between competitive traits (i.e., general competitiveness and hypercompetitiveness) and schadenfreude. Specifically, we expect these relationships to be stronger when depicted failures occur at moderate levels of game difficulty rather than at extreme ones. This expectation aligns with deservingness theory, which suggests that schadenfreude increases when misfortunes are perceived as justified or deserved (Feather and Nairn 2005; Feather and Sherman 2002). Extremely difficult game scenarios may lead viewers to attribute failure to the game's design rather than player incompetence, thereby reducing perceived responsibility and diminishing schadenfreude. Supporting this reasoning, Ben-Ze'ev (1992) contends that minor misfortunes are more effective at eliciting schadenfreude compared to severe ones. Similarly, Berndsen and Feather (2016) found that overly severe misfortunes tend to evoke compassion instead of schadenfreude. These studies indicate that schadenfreude peaks when failures are perceived as deserved yet not excessively severe. Consequently, portraying failure at moderate difficulty levels in mobile game advertisements may optimally balance perceived responsibility, increasing the likelihood that viewers attribute failure to the player's actions rather than the inherent difficulty of the game. Therefore, we hypothesize that the influence of competitive traits on schadenfreude will be stronger in moderate rather than extreme difficulty conditions.

At a conceptual level, perceived difficulty does more than define a boundary condition for the proposed moderation. Because schadenfreude is an appraisal-based emotion grounded in judgments of deservingness, any explanation should specify the situational conditions that shape failure appraisal. As noted, variation in game difficulty may lead viewers of fail ads to interpret failure either as a plausible outcome given player ability or as an expected failure by design. Accordingly, perceived difficulty serves as an essential appraisal cue for correctly inferring the pathway from competitiveness to schadenfreude. Furthermore, given that difficulty framing is a recurrent feature of mobile game advertising, incorporating perceived difficulty allows our framework to remain consistent with appraisal-based accounts of schadenfreude while more accurately reflecting the characteristic design of fail ads. On this basis, we advance the following hypotheses. Figure 1 displays the theoretical framework of this research.

**H6.** *The relationship between general competitiveness and schadenfreude will be significantly stronger when game difficulty is moderate, compared to when it is extreme, in the context of fail ads.*

**H7.** *The relationship between hypercompetitiveness and schadenfreude will be significantly stronger when game*



**FIGURE 1** | Theoretical Framework.

difficulty is moderate, compared to when it is extreme, in the context of fail ads.

#### 4 | Methodology

To examine the emotional impact of fail ads, we employed a vignette-based design with sequential static screenshots formatted to resemble typical mobile advertising environments. This approach is particularly useful for isolating the core construct of gameplay failure, while minimizing potential confounds arising from ad quality, animation, or production value. Participants, pre-screened as mobile game players and familiar with the genre, were able to easily imagine the dynamic aspects of gameplay. This design strikes a balance between ecological validity and internal control, ensuring that emotional responses are attributed to the failure manipulation rather than extraneous features (Aguinis and Bradley 2014). The stimuli were presented step by step, simulating the flow of mobile ads. They first encountered a scenario in which a thirty-second pop-up ad for a mobile game appeared on a mobile device. They were then presented with a vignette containing an image simulating a screenshot of gameplay. Finally, they viewed the ad's conclusion, accompanied by a corresponding screenshot. Stimuli were formatted to align with familiar ad formats (square images typical of Instagram/Facebook in Study 1 and full-screen mobile ratios typical of YouTube in Study 2), thus enhancing realism (see Appendix A1). The stimuli used in the experiments were custom-generated using ChatGPT, ensuring control over game content and scenario design. After viewing the vignette, participants completed a structured questionnaire measuring relevant constructs. Study 1 tested hypotheses 1 through 5, establishing foundational links between general competitiveness, hypercompetitiveness, schadenfreude, and download intention within the context of mobile game fail ads. Study 2 tested hypotheses 6 and 7, extending this framework by exploring how different levels of perceived game difficulty

influence the relationship between competitive traits and schadenfreude responses to fail ads.

#### 5 | Study 1

The objective of Study 1 is to empirically examine the core relationships of our proposed conceptual model. To achieve this, we selected a match-3 puzzle game as the experimental stimulus, due to its strong alignment with fail ads strategies. Match-3 games involve players swapping adjacent tiles to form horizontal or vertical lines of three or more identical items, which then disappear from the board. Popular examples within this genre include Candy Crush Saga (King), Gardenscapes (Playrix), Homescapes (Playrix), and Royal Match (Dream Games) (Wylie 2025). Notably, fail ads are frequently employed by match-3 puzzle game developers, such as Playrix and Dream Games, leveraging scenarios that emphasize unsuccessful gameplay to capture user attention. Therefore, the match-3 format represents an appropriate and contextually relevant choice for testing our research model.

##### 5.1 | Procedure

The study utilized a vignette-based online survey administered through Google Forms. Participants were recruited via Prolific (Palan and Schitter 2018). To enhance the relevance and quality of participant responses, Prolific's pre-screening function was used to recruit only individuals who self-identified as mobile game players (either free-to-play, premium, or both). Participants were instructed to closely review the provided vignette and supplementary visual stimuli before completing the questionnaire. Responses identified as incomplete or indicative of inattentive patterns (e.g., straight-lining) were excluded during data cleaning. The complete vignette and related images utilized in Study 1 are available in Appendix A1. Data collection

for Study 1 involved 241 participants aged between 18 and 54, with an average age of 34 years. The participant sample consisted of 42% male and 58% female respondents. A comprehensive overview of demographic details, including age, gender, and gaming-related attributes, is summarized in Table 2.

## 5.2 | Measurement Model

The constructs within the research model were measured using items adapted from previously validated scales. Respondents rated all items on a 7-point Likert scale ranging from 1 ('strongly disagree') to 7 ('strongly agree'). We first estimated all multi-item scales with their full item sets and then examined standard measurement diagnostics, including item loadings and variance inflation factors (VIFs), following common guidelines

**TABLE 2** | Study 1 demographic profile of respondents.

Demographics	Items	Subjects (N = 241)	
		Count	Percentage
Gender	Male	101	42%
	Female	140	58%
Age	18–24	36	15%
	25–34	93	39%
	35–44	72	30%
	45–54	40	17%
Willingness to pay for games	Yes	62	26%
	No	179	74%
Gaming frequency	Daily	136	56%
	3 ~ 4 times a week	84	35%
	Once every two weeks	21	9%

for measurement refinement (Hair et al. 2013, 2019). Schadenfreude was assessed using three items adapted from Marticotte and Arcand (2017), exhibiting high internal consistency ( $\alpha = 0.931$ ). Hypercompetitiveness was evaluated with three items from Orosz et al. (2018), also showing adequate reliability ( $\alpha = 0.860$ ). General competitiveness initially included four items from Bönte et al. (2017), though one item was removed due to a high variance inflation factor (VIF), resulting in a reliable three-item measure ( $\alpha = 0.902$ ). The dependent variable, download intention, was originally measured using three items from Gu et al. (2017), with one item removed for exhibiting a high VIF, leaving a robust two-item scale ( $\alpha = 0.920$ ). Following item removal, all VIF values remained below the recommended threshold of 5, indicating no substantial issues with multicollinearity (Hair et al. 2013).

Internal consistency of the scales was confirmed using Cronbach's alpha and composite reliability (rho\_a & rho\_c). Convergent validity was assessed using the average variance extracted (AVE) metric (see Table 3). Cronbach's alpha and composite reliability values exceeded the recommended threshold of 0.7, and AVE values were all above the 0.5 threshold, confirming the reliability and validity of the measured constructs. Discriminant validity was verified using both the heterotrait-monotrait ratio (HTMT) and Fornell-Larcker criteria (see Table 4). For the HTMT ratio, values below 0.85 are recommended (Hair et al. 2019), while the Fornell-Larcker criterion requires the square root of AVE for each construct to surpass its highest correlation with other constructs. All constructs addressed these criteria, satisfying discriminant validity.

To strengthen the estimation of hypothesized effects, control variables, including age, gender, gaming frequency, and willingness to pay for premium games, were included in all analyses. Gaming frequency was measured using a single-item asking how often participants play mobile games, ranging from 1 ('once every 2 weeks') to 3 ('every day'). Demographic data, including age and gender, were collected from Prolific's participant profiles. Willingness to pay for premium games was similarly obtained from Prolific data, with participants coded as 0 if they reported playing only free-to-play games and 1 if they played premium games exclusively or in combination with

**TABLE 3** | Study 1 scale reliability and validity.

Construct	Items	Mean	St. Dev.	Excess Kurtosis	Skewness	Factor loading	Cronbach's alpha	CR (rho_a)	CR (rho_c)	AVE
Download intention	DI1	2.332	1.485	-2.448	0.270	0.960	0.920	0.922	0.961	0.926
	DI3	2.373	1.517	-2.424	0.289	0.964				
General competitiveness	GC1	4.593	1.707	-2.743	-0.102	0.900	0.902	0.916	0.938	0.836
	GC3	3.888	1.792	-2.841	-0.009	0.899				
	GC4	4.207	1.682	-2.741	-0.050	0.943				
Hypercompetitiveness	HC1	3.436	1.812	-2.846	0.040	0.909	0.860	0.882	0.915	0.783
	HC2	3.303	1.863	-2.873	0.046	0.936				
	HC3	1.809	1.261	-0.349	0.954	0.804				
Schadenfreude	SCH1	2.361	1.399	-2.091	0.383	0.932	0.931	0.934	0.956	0.878
	SCH2	2.241	1.466	-2.208	0.380	0.936				
	SCH3	2.083	1.364	-1.656	0.571	0.944				

**TABLE 4** | Study 1 discriminant validity.

HTMT ratio					Fornell-Larcker's criterion			
	1	2	3	4	1	2	3	4
1. Download intention					0.962			
2. General competitiveness	0.057				0.052	0.914		
3. Hypercompetitiveness	0.170	0.503			0.150	0.454	0.885	
4. Schadenfreude	0.713	0.137	0.229		0.662	0.126	0.206	0.937

**TABLE 5** | Study 1 Hypothesis testing results.

Hypothesis	Cause	Effect	$\beta$	$t$	$p$ -value	$f^2$	Result
H1	Schadenfreude	Download Intention	0.656	13.763	0.000	0.737	Supported
H2	General competitiveness	Schadenfreude	0.041	0.648	0.517	0.001	Non-significant direct effect, but significant total effect via hypercompetitiveness
H3	Hypercompetitiveness	Schadenfreude	0.187	2.732	0.006	0.032	Supported

free-to-play games. The final set of constructs and measurement items is presented in Appendix A2.

### 5.3 | Structural Model

Data analysis was conducted using Partial Least Squares Structural Equation Modeling (PLS-SEM) through SmartPLS 4 (Ringle et al. 2024). PLS-SEM was chosen for its appropriateness in exploratory research aimed at theory development, especially in complex models with data that may not adhere to normal distribution assumptions (Chin et al. 2008; Cuesta-Valiño et al. 2024; Hair et al. 2019). Specifically, PLS-SEM is beneficial in this study because it allows simultaneous estimation of intricate relationships involving multiple mediators and moderators, aligns well with the study's theoretical development objectives, and accommodates models without strict distributional requirements.

The structural model evaluation and hypotheses testing were evaluated using PLS-SEM with bootstrapping. To ensure rigorous statistical inference, 10,000 bootstrap resamples were generated using the bias-corrected and accelerated (BCa) method. The outcomes of hypothesis testing are summarized in Table 5. The complete set of path estimates, including those related to the proposed hypotheses, additional structural paths, and control variables, is provided in Appendix A3. The coefficient of determination ( $R^2$ ) values, which assess the explanatory strength of endogenous variables, are interpreted as substantial, moderate, or weak at thresholds of 0.75, 0.50, and 0.25, respectively (Hair et al. 2019). The dependent variable, download intention, exhibited an  $R^2$  value of 0.448, indicating a satisfactory predictive capacity. Regarding our hypotheses, the results revealed that schadenfreude significantly affects download intention ( $\beta = 0.656, p < 0.001$ ), thus supporting H1. However, general competitiveness did not significantly affect schadenfreude ( $\beta = 0.041, p = 0.517$ ), which initially suggested a lack of support for H2. However, this result should be interpreted in light of the fact that H2 hypothesizes the total

effect, which includes both direct and indirect effects through hypercompetitiveness. Although the direct effect was not significant, a significant indirect effect through hypercompetitiveness was observed, as detailed in the mediation analysis section. This suggests that, while the direct effect of general competitiveness on schadenfreude is not significant, the total effect is still supported through hypercompetitiveness. In contrast, hypercompetitiveness was positively associated with schadenfreude ( $\beta = 0.187, p = 0.006$ ), supporting H3. To further clarify the nature of these relationships, we conducted a mediation analysis.

### 5.4 | Mediation Analysis

Mediation analysis involved testing the significance of both indirect and direct effects, as presented in Table 6. In relation to our hypotheses, we first identified an indirect effect from general competitiveness to schadenfreude via hypercompetitiveness, supporting H4. As general competitiveness did not directly influence schadenfreude, hypercompetitiveness fully mediates this relationship. It is important to note that while the direct effect was insignificant, the total effect of general competitiveness on schadenfreude remains significant ( $\beta = 0.126, t = 2.015, p = 0.043, \text{BCa } 95\% \text{ CI } [0.001, 0.247]$ ), meaning that the overall relationship is evident through its mediating influence. Similarly, the indirect pathway linking general competitiveness to download intention through hypercompetitiveness and schadenfreude was also statistically significant, providing support for H5. Given that the direct relationship between general competitiveness and download intention was insignificant, the results indicate that hypercompetitiveness and schadenfreude fully mediate the relationship between general competitiveness and download intention in the context of mobile game fail ads. Within the framework of mobile game fail ads, hypercompetitiveness, alongside schadenfreude, emerges as a critical mediating factor in explaining how trait competitiveness influences download intentions. The entire structural model results are depicted in Figure 2.

TABLE 6 | Study 1 mediation analysis results.

Hypotheses	Relationship	Effect	$\beta$	95% confidence interval		p-value	Significance	Conclusion
				Low	High			
H4	General Competitiveness → Hypercompetitiveness → Schadenfreude	Indirect effect	0.085	0.022	0.153	0.011	Yes	Supported (Full Mediation)
		Direct effect	0.041	-0.084	0.162	0.517	No	
H5	General Competitiveness → Hypercompetitiveness → Schadenfreude → Download Intention	Indirect effect	0.056	0.014	0.106	0.015	Yes	Supported (Full Mediation)
		Direct effect	-0.041	-0.159	0.073	0.490	No	

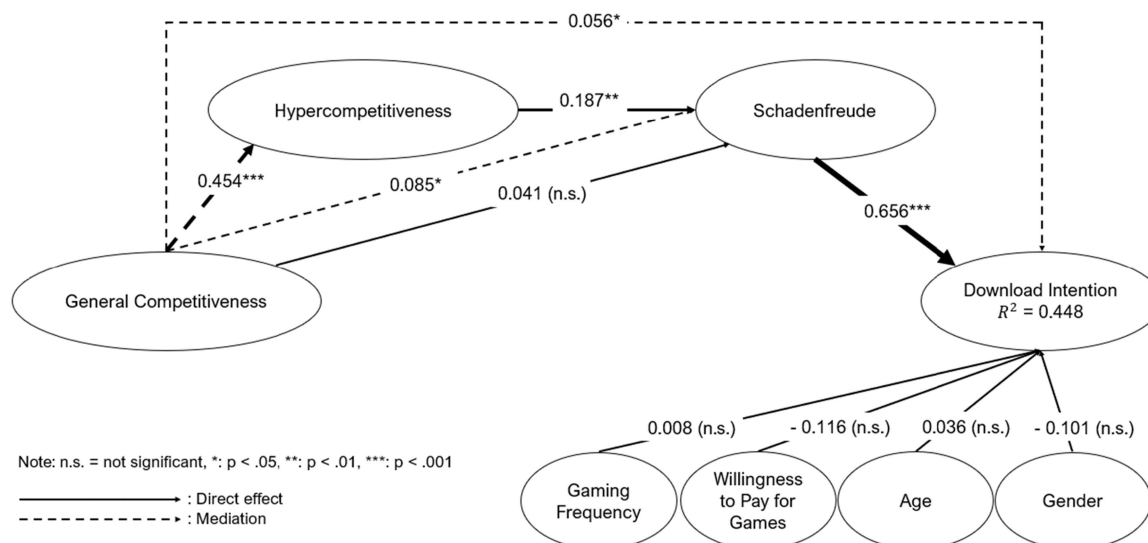


FIGURE 2 | Study 1 PLS-SEM Analysis Results.

### 5.5 | Alternative Model Tests

To explore potential alternative explanations, two alternative mediation pathways were examined. The first alternative model tested whether hypercompetitiveness increases general competitiveness, which in turn enhances schadenfreude. The second alternative model proposed that general competitiveness increases schadenfreude, which subsequently activates hypercompetitiveness. Both alternative models were estimated using PLS-SEM with bias-corrected and accelerated bootstrapping based on 10,000 resamples. The results showed that neither indirect effect was significant. Specifically, the first alternative model yielded  $p = 0.502$  ( $\beta = 0.019$ , 95% BCa CI [-0.043, 0.074]), and the second alternative model yielded  $p = 0.163$  ( $\beta = 0.019$ , 95% BCa CI [-0.000, 0.052]). As expected, neither pathway predicted download intention, further supporting the theoretical direction and robustness of our proposed model, in which general competitiveness serves as the antecedent that shapes hypercompetitive attitudes, which in turn predicts schadenfreude.

### 5.6 | Unique Effects of Hypercompetitiveness

To rule out the possibility that the observed effects are driven by shared variance between general competitiveness and hypercompetitiveness, we conducted a robustness check in which hypercompetitiveness was residualized on general competitiveness. Specifically, we regressed hypercompetitiveness on general competitiveness and used the resulting residual as the focal predictor in the mediation model, with schadenfreude as the mediator and download intention as the outcome. Effects were estimated using Hayes' PROCESS macro (Model 4) with 10,000 bias-corrected and accelerated bootstrap samples. Results showed that residualized hypercompetitiveness significantly predicted schadenfreude ( $\beta = 0.181$ , 95% BCa CI [0.060, 0.316]). The indirect effect of residualized hypercompetitiveness on download intention via schadenfreude was also significant ( $\beta = 0.129$ , 95% BCa CI [0.042, 0.231]), whereas the direct effect was not ( $\beta = 0.030$ , 95% BCa CI [-0.084, 0.151]). Overall, these results indicate that the proposed mechanism is driven by the unique component of hypercompetitiveness rather than the variance shared with general competitiveness.

## 5.7 | Extreme-Groups Analysis of Schadenfreude

As an additional robustness check, we conducted an extreme-groups analysis by comparing participants in the top and bottom quartiles of schadenfreude. This test assesses whether schadenfreude differentiates download intention in a way that is not driven by small deviations around the mean. Results showed that participants in the high-schadenfreude group reported significantly higher download intention than those in the low-schadenfreude group ( $\beta = 1.982$ ,  $SE = 0.218$ ,  $p < 0.001$ ). This difference remained significant after controlling for general competitiveness and hypercompetitiveness, indicating that schadenfreude explains variance in download intention beyond competitiveness traits rather than merely reflecting individual differences in competitiveness.

## 5.8 | Supplementary Experiment: Neutral Advertisement Without Failure Cues

To further assess whether the observed effects are specific to failure-based content rather than general reactions to the advertisement, we conducted a supplementary experiment using a modified version of the stimulus and vignette. In this experiment, the advertisement followed the same gameplay sequence but did not depict an explicit failure outcome. Instead, the ad concluded naturally without indicating either success or failure, a format also commonly used in mobile game advertising. The accompanying vignette was revised accordingly to describe the gameplay demonstration without emphasizing repeated failure (see Appendix A4). Participants completed the same survey measures as in the original study. The items originally used to measure schadenfreude (e.g., enjoyment, pleasure, and satisfaction with what happened in the ad) were retained. In the absence of a failure outcome, however, these items no longer capture schadenfreude but instead reflect general ad enjoyment, defined as positive affective responses to the ad that are not tied to another's failure. The resulting sample comprised 139 participants aged 18 to 54 years ( $M = 36$ ), of whom 48% identified as male and 52% as female.

We re-estimated the proposed model using PLS-SEM with 10,000 bias-corrected and accelerated (BCa) resampling, substituting general ad enjoyment for schadenfreude as the mediator. The full structural model results are shown in Appendix A5. The results showed that the path from general competitiveness to hypercompetitiveness remained significant ( $\beta = 0.534$ ,  $p < 0.001$ ), replicating the upstream relationship observed in the main analysis. However, neither hypercompetitiveness ( $\beta = 0.034$ ,  $p = 0.375$ ) nor general competitiveness ( $\beta = 0.030$ ,  $p = 0.378$ ) significantly predicted general ad enjoyment, and general ad enjoyment therefore did not mediate the relationship between competitive traits and download intention. The only significant downstream path was from general ad enjoyment to download intention ( $\beta = 0.675$ ,  $p < 0.001$ ), indicating that in neutral-framed advertisements, positive affect toward the ad predicts download intention independently of competitiveness. Taken together, these findings indicate that the mediating process identified in the main study does not generalize to advertisements without failure cues, supporting the interpretation that the effects observed in fail ads are specific to schadenfreude, a positive reaction to failure-based

content, rather than to general positive reactions to gameplay demonstrations. When explicit failure cues are removed, the pathway through schadenfreude attenuates and is no longer significant, suggesting that the proposed emotional mechanism depends on failure-salient content. By contrast, the association between general competitiveness and hypercompetitiveness remains robust across conditions, consistent with a baseline dispositional linkage. This pattern underscores the importance of specifying boundary conditions for when competitiveness is expressed as schadenfreude. Study 2 advances this logic by testing perceived game difficulty as a deservingness-relevant cue that conditions the competitiveness-to-schadenfreude link.

## 6 | Study 2

Study 1 focused on examining the foundational aspects of our research framework, and Study 2 extends this framework by exploring how varying levels of game difficulty moderate schadenfreude responses to fail ads. When a game's difficulty is excessively high, viewers may attribute failures to the extreme challenge presented by the task rather than to player incompetence. Conversely, failures at moderate difficulty levels are more likely to be perceived as preventable, making the individual's failure appear more deserved. Guided by this rationale, we propose that schadenfreude will be stronger when fail ads portray moderate rather than extreme game difficulty levels. Study 2 investigates this moderation effect to enrich our understanding of the conditions under which schadenfreude influences consumer responses to fail ads.

### 6.1 | Procedure

Study 2 employed a between-subjects experimental design with variations in the vignette, supplementary images, and game type from Study 1 to enhance generalizability. Unless otherwise specified, the structured questionnaire and measurement model were consistent with those used in Study 1. For Study 2, the selected game genre was a zombie survival game. Two separate surveys were conducted via Prolific, each targeting a different difficulty condition (moderately difficult vs. extremely difficult). Prolific's participant screening function was utilized to ensure that participants could not take both surveys, and individuals who participated in Study 1 were excluded from Study 2.

The manipulation of perceived difficulty involved distinct phrases and visual indicators. For the extremely difficult condition, the phrase "95% of players can't pass this stage!" was displayed, accompanied by visuals indicating the highest difficulty setting labeled "Nightmare." Conversely, the moderately difficult condition featured the phrase "50% of players can't pass this stage!" along with visuals representing a normal difficulty level (three out of five). The vignette and supplementary images utilized in Study 2 are provided in Appendix B1 and B2. An online pretest was conducted to assess the effectiveness of the difficulty manipulation. The two surveys were administered via Prolific, resulting in a total of 49 participants ( $M_{\text{age}} = 36.1$ ,  $SD = 1.49$ ; 32.7% female). Participants were randomly assigned to either a moderate difficulty condition ( $n = 25$ ) or an extreme difficulty condition ( $n = 24$ ). Participants were asked to answer a single-item measure of perceived difficulty ('How difficult do

you think the game is?') after observing the given vignette and supplementary images. Perceived difficulty was measured using a 7-point Likert scale ranging from 1 ('very easy') to 7 ('very difficult'). Consistent with our expectations, participants in the extreme difficulty condition ( $M = 5.71$ ,  $SD = 1.12$ ) perceived the task as significantly more difficult than those in the moderate difficulty condition ( $M = 4.60$ ,  $SD = 1.61$ ;  $t(47) = -2.81$ ,  $p = 0.004$ , one-tailed). These results indicate that the difficulty manipulation effectively differentiated the two conditions. A total of 247 participants aged between 18 and 54 were recruited for Study 2, with 120 participants assigned to the moderately difficult condition and 127 participants assigned to the extremely difficult condition. The average age of participants was 34 years, with a gender distribution of 39% male and 61% female (see Table 7).

## 6.2 | Measurement Model

The measurement model employed in Study 2 was consistent with that of Study 1, unless otherwise specified. The extremely difficult condition was coded as 1. To obtain a more nuanced measure, gaming frequency was expanded to a 6-point Likert scale ranging from 1 ('once a month') to 6 ('daily'), although this modification did not significantly affect the analysis outcomes. Reliability and validity evaluations mirrored those of Study 1. Cronbach's alpha and composite reliability ( $\rho_a$  &  $\rho_c$ ) values exceeded the recommended threshold of 0.7, while AVE values surpassed 0.5, confirming both reliability and validity across the full dataset as well as the separated groups (see Appendix B3). Discriminant validity was satisfied through both the HTMT ratio and the Fornell-Larcker criterion, with no issues identified across all dataset groups (see Appendix B4).

## 6.3 | Structural Model

As with Study 1, the results for Study 2 were obtained using PLS-SEM through SmartPLS 4, utilizing 10,000 BCa bootstrap resamples (Ringle et al. 2024). For multigroup analysis (MGA), a non-parametric permutation-based test with 10,000 permutations was employed. The permutation approach is recommended when comparing single pathways between groups in PLS-MGA due to its robustness and accuracy (Klesel et al. 2022). Additionally, permutation-based tests facilitate the PLS-SEM measurement invariance assessment of composite models (MICOM). Henseler et al. (2016) proposed a three-step non-parametric permutation-based approach, specifically tailored for PLS-SEM analyses. This procedure includes evaluating: (1) configural invariance, (2) compositional invariance, and (3) the equality of composite mean values and variances. In our study, consistent indicator treatment, data cleaning processes, and measurement models across groups ensured configural invariance. All correlations fell within the 95% permutation-based confidence intervals, confirming compositional invariance. However, the assessment of equality in composite means and variances revealed differences across groups, indicating partial measurement invariance. This ensures that the measurement model was consistent among groups and justifies the comparison of group-specific model differences. Results from MICOM showed that observed group differences are not attributable to discrepancies in measurement structures between the groups. The main theoretical relationships from Study 1 were replicated in Study 2, reinforcing the robustness of the overall theoretical framework. Notably, an exception emerged regarding the direct path from hypercompetitiveness to download intention ( $\beta = 0.230$ ,  $p < 0.001$ ), which was significant in Study 2 but not in Study 1. This discrepancy may reflect differences in genre preferences linked to competitive orientations. Specifically, Study 1 featured a match-3 puzzle game,

**TABLE 7** | Study 2 demographic profile of respondents.

Demographics	Items	Subjects ( $N = 247$ )	
		Count	Percentage
Gender	Male	96	39%
	Female	151	61%
Age	18–24	39	16%
	25–34	98	40%
	35–44	62	25%
	45–54	48	19%
Willingness to pay for games	Yes	59	23%
	No	188	77%
Gaming Frequency	Daily	106	43%
	5~6 times a week	35	14%
	3~4 times a week	46	18%
	Once a week	34	14%
	Once every two weeks	8	3%
	Once every month	18	7%
Group	Extremely difficult	127	51%
	Moderately difficult	120	49%

while Study 2 involved a zombie survival game, indicating potential genre-specific influences. This interpretation appears to resonate with empirical findings linking gaming motivations to genre preferences (Scharkow et al. 2015). The results could be found in Appendix B5.

## 6.4 | Multi-Group Analysis (MGA) Results

Table 8 summarizes the results of the permutation-based MGA. Concerning our hypotheses, the relationship between general competitiveness and schadenfreude was not significant in the extremely difficult condition ( $\beta = 0.004$ ,  $p = 0.964$ ) but was significant in the moderately difficult condition ( $\beta = 0.230$ ,  $p = 0.015$ ). The difference between these two conditions was statistically significant ( $p = 0.047$ ), thus supporting H6. In addition, the relationship between hypercompetitiveness and schadenfreude was likewise not significant in the extremely difficult condition ( $\beta = 0.117$ ,  $p = 0.229$ ) and was significant in the moderately difficult condition ( $\beta = 0.224$ ,  $p = 0.029$ ). However, the difference between the two groups was not statistically significant ( $p = 0.228$ ), leading to the rejection of H7. Other than the hypothesized paths, no pathways demonstrated significant group differences, even if they were significant under specific conditions.

## 6.5 | Robustness Check

To verify the robustness of the MGA findings, we conducted a moderated mediation analysis using a custom-modified version of Hayes' PROCESS macro (based on Model 84), which aligns with our theoretical framework (see Figure 1). The analysis was performed in R with 10,000 bias-corrected bootstrap samples. The interaction between perceived difficulty and general competitiveness on schadenfreude was significant ( $\beta = -0.241$ , 95% BCa CI [-0.461, -0.010]), whereas the interaction with hypercompetitiveness was not ( $\beta = -0.057$ , 95% BCa CI [-0.361, 0.255]). The index of moderated mediation was also significant (index = -0.172, 95% BCa CI [-0.337, -0.007]), indicating that the indirect effect of general competitiveness on download intention through schadenfreude varied with perceived difficulty. These results replicate the MGA pattern and suggest that schadenfreude, as an emotional response, is influenced by situational cues such as perceived difficulty.

## 7 | General Discussion

Across two experimental studies, our findings illustrate that schadenfreude is positively associated with consumers' intentions to download mobile games featured in fail ads. This result supports our assertion that failure scenarios can generate emotional responses that promote favorable consumer behaviors within suitable marketing contexts. These findings align with previous literature linking schadenfreude to beneficial consumer outcomes, such as satisfaction and purchase intentions (e.g., Moisieiev et al. 2020). Our contribution extends this literature specifically into the domain of mobile game advertising. Additionally, this research underscores the significance of individual competitiveness differences in shaping schadenfreude reactions. While hypercompetitiveness consistently

TABLE 8 | Summary of multigroup analysis results.

Hypothesis	Cause	Effect	Extremely difficult		Moderately difficult		Difference	MGA p-value
			$\beta$	p values	$\beta$	p values		
H6	Schadenfreude	Download Intention	0.632***	0.000	0.590***	0.000	0.042	0.325
	General competitiveness	Schadenfreude	0.004	0.964	0.230*	0.015	-0.226*	0.047
H7	Hypercompetitiveness	Schadenfreude	0.117	0.229	0.224*	0.029	-0.106	0.228
	General competitiveness	Hypercompetitiveness	0.415***	0.000	0.481***	0.000	-0.066	0.286
	General competitiveness	Download Intention	-0.046	0.606	0.065	0.368	-0.111	0.157
	Hypercompetitiveness	Download Intention	0.209*	0.012	0.188	0.052	0.021	0.432

\* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$ .

influenced *schadenfreude*, general competitiveness alone did not directly affect *schadenfreude* without strong situational cues. In contrast, when considering total effects, general competitiveness was found to influence *schadenfreude* through hypercompetitiveness. This suggests that hypercompetitiveness mediates the relationship between general competitiveness and *schadenfreude*, providing a more complete picture of the relationship. This result emphasizes the complex interplay between different competitive traits and provides deeper insight into how individual forms of competitiveness shape consumer responses within competitive, comparison-oriented marketing environments. In a supplementary fail-neutral experiment, the association between general competitiveness and hypercompetitiveness remained stable across conditions, whereas the link from competitive traits to *schadenfreude* weakened when failure cues were absent. These results suggest that the relationship between the competitive traits is not an artifact of the stimulus manipulation, but the downstream emotional process through which competitiveness translates into *schadenfreude* varies with the presence of failure cues. Study 2 builds on this logic by examining perceived game difficulty as a deservingness cue that specifies when failure depictions are likely to elicit *schadenfreude* among competitively oriented consumers.

Study 2 expanded upon these findings by identifying perceived game difficulty as an essential boundary condition. When game difficulty was moderate, both general competitiveness and hypercompetitiveness were positively related to *schadenfreude*, likely due to perceptions that the failure was self-caused and thus deserved. Conversely, extreme game difficulty reduced the perception of deservingness, weakening the *schadenfreude* response. These results show that *schadenfreude* is shaped by both competitive dispositions and interpretive cues that guide how a failure is perceived. These dispositions enhance *schadenfreude* when the situation presents the failure as controllable and deserved. However, when the same failure is attributed to external difficulty rather than the player's performance, the influence of competitiveness is attenuated. Therefore, identifying task difficulty as a theoretically grounded moderator clarifies the conditions under which the competitiveness-to-*schadenfreude* pathway holds. Additionally, it highlights how emotional responses in fail ads can be shaped by design choices that guide viewers' interpretation of the failure. These findings provide insight into how people respond to failure-based advertisements and why these ads can influence consumers' interest in a game. The results underscore the importance of both personal tendencies and the manner in which failure is presented in shaping emotional reactions and subsequent choices. This lays the groundwork for investigating similar reactions in other contexts where brief moments of failure are used to engage audiences.

## 7.1 | Theoretical Implications

This study provides several theoretical contributions. First, it enriches existing research on consumer responses by establishing *schadenfreude* as a key emotional mechanism that predicts positive consumer outcomes in the context of mobile game fail ads, an important but understudied domain in mobile game advertising. Prior studies have examined *schadenfreude* in contexts such as brand rivalry (Phillips-Melancon and

Dalakas 2014), purchase satisfaction (Moisieiev et al. 2020), counterfeit consumption (Marticotte and Arcand 2017), comparative advertising (Yucel-Aybat and Kramer 2018), and online shaming (Barron et al. 2023). The current study extends this line of research by demonstrating the relevance of *schadenfreude* in the distinctive and increasingly prevalent context of mobile game fail advertisements. Additionally, applying the deservingness theory, the study illustrates how advertising cues, such as depicted task difficulty, affect *schadenfreude* experiences. This enhances understanding of how contextual elements, particularly the framing of failure, influence consumers' emotional reactions.

Second, drawing upon trait activation theory (Tett and Burnett 2003), this research advances the literature on individual competitiveness by distinguishing between general competitiveness and hypercompetitiveness as two motivationally distinct constructs. Our findings reveal critical differences in how these traits affect emotional responses. Across both studies, hypercompetitiveness consistently affected *schadenfreude*, while general competitiveness alone did not directly influence this emotional outcome. Furthermore, the mediation analysis confirmed that hypercompetitiveness bridges the link between general competitiveness and *schadenfreude*, illustrating the importance of considering motivational orientations rather than mere intensity of competitiveness. These findings suggest that competitive orientations function as psychological mechanisms connecting general trait competitiveness to emotional experiences. Importantly, the fail-neutral evidence indicates that the stimulus context changes the affective expression of competitiveness, specifically whether competitiveness translates into *schadenfreude*. This pattern reinforces the value of modeling boundary conditions for emotion-specific mechanisms.

Lastly, the study clarifies the intricate relationship between general competitiveness and *schadenfreude* by demonstrating how situational factors affect the link between personality traits and emotional reactions. In both studies, general competitiveness alone did not directly affect *schadenfreude*, but when considering total effects, the relationship between general competitiveness and *schadenfreude* was significantly mediated by hypercompetitiveness. However, in Study 2, where failures were perceived as deserved due to moderate game difficulty, general competitiveness had a direct positive relationship with *schadenfreude*. This finding is consistent with prior research by Yucel-Aybat and Kramer (2018), which showed that general competitiveness positively predicted *schadenfreude* in comparative advertising scenarios when the failure appeared justified. These findings emphasize the necessity of considering relevant contextual factors when exploring the relationships between personality traits and emotional responses.

## 7.2 | Practical Implications

This research offers several valuable insights for mobile game marketing and digital advertising strategies aimed at enhancing emotional engagement and psychological resonance. Firstly, our findings emphasize the distinctiveness of mobile game fail ads, reflecting their unconventional but impactful appeal. Unlike traditional ads that typically feature polished gameplay

or direct persuasive appeals, fail ads capture viewer attention by featuring gameplay failures that viewers may experience as *schadenfreude*. This complex emotional reaction enhances consumer interest and positively influences behavioral intentions. Marketers should note that depicting humorous and avoidable failures can generate strong viewer engagement, thus creating impactful advertising content.

Additionally, this study illustrates the importance of perceived difficulty in influencing the effectiveness of fail ads. When the portrayed game difficulty appears excessively challenging, *schadenfreude* responses may diminish due to reduced perceptions that the failure was deserved. Conversely, moderate difficulty portrayals can enhance *schadenfreude* by suggesting the failure is plausible yet avoidable. Practically, advertisers can leverage visual cues and strategic messaging, such as “50% fail this level” or visibly selecting mid-level difficulty settings to communicate an optimal challenge. Achieving this balance can reinforce *schadenfreude* and enhance favorable consumer responses to fail ads.

Moreover, the findings suggest potential strategies for personality-based targeting. Individuals with competitive traits, particularly those high in hypercompetitiveness who seek validation through outperforming others, tend to respond more positively to fail ads. Therefore, fail ads can strategically include competitive elements like time constraints, scoring systems, leaderboards, or explicit ranking displays. Such cues can activate viewers’ competitive orientations, resulting in stronger emotional engagement. This aligns with broader personalization strategies in gamification research, where competitive framing is found to increase receptiveness among competitively oriented users (Amo et al. 2020). For advertisers, this implies that effective fail ads not only show failure but situate it explicitly within a competitive context. Beyond the specific context of fail ads, the research suggests that incorporating competitive cues in advertising can trigger the activation of competitive dispositions in consumers. Based on trait activation theory, competitive elements, such as rankings, time limits, or direct challenges, may evoke latent competitive dispositions, potentially enhancing emotional and behavioral responses. Thus, ad formats emphasizing competition or social comparison can better engage users predisposed to competitive behavior. Advertisers can implement these strategies by embedding competition-relevant cues into ad narratives without requiring explicit user profiling.

Finally, although this research centers on mobile game fail ads, the identified *schadenfreude* mechanism is applicable in various advertising contexts. Advertisements depicting minor mistakes, poor decisions, or humorous social errors can similarly evoke *schadenfreude*, promoting favorable consumer reactions. Industries, such as financial services, educational platforms, or fitness programs, could utilize relatable and amusing failure scenarios to evoke *schadenfreude* effectively. By understanding the triggers for *schadenfreude*, marketers across diverse sectors can leverage this powerful emotional response to enhance advertising effectiveness.

### 7.3 | Limitations and Future Research

This study has several limitations that point to useful directions for future work. Although vignette experiments offer strong

internal control, they rely on self-reported intentions rather than observed behaviors (Aguinis and Bradley 2014). Future research could build on this work by using dynamic video ads in field settings to improve ecological validity and examine whether the observed patterns extend to real outcomes such as actual app downloads or continued gameplay. Measuring *schadenfreude*, however, presents a methodological challenge, as the emotion is defined by pleasure elicited specifically by another’s failure. Constructing a true control is difficult because presenting the same affective items in non-failure or success scenarios would elicit qualitatively different emotions rather than an absence of *schadenfreude*. That being said, future studies could identify situational moderators that precisely vary the level of *schadenfreude* while holding other affective responses constant in the context of mobile game ads. Doing so would make more rigorous experimental contrasts possible. Moreover, while perceived difficulty served as one relevant situational feature in this study, other contextual factors may also shape how competitiveness translates into *schadenfreude*. Subsequent research could explore moderators more directly tied to competitive dynamics or other features of fail ad presentations.

Future work can also focus on the role of competitive orientations in shaping the relationship between general trait competitiveness and emotional responses beyond *schadenfreude*. Such work could offer deeper insight into the psychological mechanisms through which the competitive tendency is expressed in consumer behavior, particularly in contexts involving competition, social comparison, or performance evaluation. Future studies can also explore other emotional and psychological mechanisms linking individual competitiveness to consumer behaviors beyond *schadenfreude*. Investigating a wider range of emotions and responses, such as pride, frustration, or anxiety, can enrich understanding of how competitive traits interact with consumer decisions. Additionally, employing neuroimaging or physiological methods could provide novel insights into the underlying cognitive and emotional processes activated by competitive cues and advertising content (Cherubino et al. 2019).

Beyond the present studies, future research could further examine the conditions under which a broad competitive disposition becomes a more extreme win-at-all-costs orientation. Prior work suggests that the association between general competitiveness and hypercompetitiveness can differ across individuals as a function of relatively stable dispositions such as core self-evaluations (e.g., Swab et al. 2024). In parallel, research on competitive motivation suggests that situational cues such as contest structure or performance feedback can shape the extent to which competitive orientations are expressed, over and above individual differences (Amo et al. 2020; Boudreau et al. 2016; Morgan et al. 2023; Woike and Hafenbrädl 2020). Building on these perspectives, future studies could develop and validate state-based manipulations that temporarily intensify win-at-all-costs motivation and test how such situational triggers relate to hypercompetitive motivation without conflating them with the baseline linkage between the two competitiveness constructs.

Lastly, future research can explore the social dynamics involved in sharing and discussing fail ads on social media platforms. Specifically, examining how peer interactions, such as

comments, likes, or shares, influence individual emotional responses to these ads could reveal mechanisms through which social influence either amplifies or mitigates consumers' experiences of *Schadenfreude* or other emotional reactions. Understanding the role of social validation, conformity pressures, and online community norms in shaping these reactions could provide marketers with deeper insights into how fail ads become viral and how consumer engagement can be strategically enhanced (Gibreel et al. 2025). Such knowledge would not only inform viral marketing practices but also enable marketers to leverage social network dynamics more effectively to maximize campaign reach and impact.

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## Conflicts of Interest

The authors declare no conflicts of interest.

## Data Availability Statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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### Supporting Information

Additional supporting information can be found online in the Supporting Information section.

Appendices\_Fail to Win\_\_PM.202501061.R2.