Journal of Business Research 199 (2025) 115506

Contents lists available at ScienceDirect

Journal of Business Research

journal homepage: www.elsevier.com/locate/jbusres

When suffering hurts more: suffering for material products reduces intrinsic motivation, well-being, and repurchase intention compared to experiences☆

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ARTICLE INFO

Keywords:
Consumer suffering
Consumer effort
Material consumption
Experiential consumption
Intrinsic motivation
Eudaimonic well-being
Repurchase intention

ABSTRACT

Suffering (significant effort with negative valence) is increasingly present in consumption, yet little is known about when it undermines motivation or well-being. This paper examines how suffering affects intrinsic motivation, well-being, and repurchase intention, moderated by material and experiential product types. Across four studies, we test whether suffering (vs. control) has differential effects on consumer outcomes. Study 1 (N = 300) shows that suffering reduces well-being in material but not experiential purchases. Studies 2a (N = 429) and 2b (N = 394) replicate this across scenarios, showing that suffering in material contexts lowers well-being and repurchase intention, effects not observed for experiential purchases. Study 3 (N = 487) shows that in material contexts, suffering reduces intrinsic motivation and well-being, thereby decreasing repurchase intention. These findings demonstrate that suffering undermines outcomes in material consumption, while experiential consumption appears insulated. We extend self-determination theory by showing how suffering impacts motivation across consumption types.

1. Introduction

Many consumers, either willingly or unwillingly, encounter moments of suffering, whether through physical discomfort (Williams & Craig, 2016) or psychological strain (Meerwijk & Weiss, 2011). Suffering, defined here as *significant effort* combined with *negative valence* (Inzlicht & Campbell, 2022; Olivola & Shafir, 2013), is becoming increasingly prevalent in consumer behavior (Kastanakis et al., 2022). For instance, the extreme tourism industry, projected to exceed $1 trillion by 2030 (McKinsey & Company, 2023), illustrates how consumers actively seek intense and often unpleasant experiences for their memorability (Keinan & Kivetz, 2011). Conversely, exposure to suffering may also lead consumers to tolerate negative conditions they might otherwise avoid, believing it is morally appropriate to do so (Lin et al., 2023). This paradox raises a theoretical question: when does suffering support well-being and motivation (Bloom, 2022), and when does it undermine them (Inzlicht & Campbell, 2022)? At the same time, firms increasingly design experiences involving waiting, discomfort, or challenge—often assuming these enhance engagement or value (Chew, 2018). Yet little is known about when such suffering might backfire. Our research responds to this tension by examining how suffering, as a distinct, negatively valenced form of effort, influences intrinsic motivation, well-being, and repurchase intentions across material and experiential consumption contexts.

Material and experiential purchases offer distinct contexts in which suffering may affect consumer well-being. Material consumption refers to the acquisition of tangible goods intended for ownership, such as clothing or electronics (Kumar et al., 2014; Nicolao et al., 2009), whereas experiential consumption involves acquiring experiences facilitated by activities or goods, such as travel or dining (Bastos & Moore, 2021; Kumar & Gilovich, 2015). The nature of suffering may differ between these product types based on goal attainment. In material purchases, suffering often arises as a byproduct of acquisition (e.g., enduring long lines or adverse conditions), which can undermine ownership satisfaction by shifting focus from anticipated enjoyment to the obstacles endured (Bauer et al., 2019; Cutright & Samper, 2014). In contrast, for experiential purchases, suffering is often embedded in the goal itself, where discomfort (e.g., enduring harsh conditions during a

☆ This article is part of a special issue entitled: 'Pain & Pleasure Marketing' published in Journal of Business Research.

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https://doi.org/10.1016/j.jbusres.2025.115506
Received 4 April 2024; Received in revised form 27 May 2025; Accepted 29 May 2025
Available online 24 June 2025

hike) can enhance the experience's overall meaning and value (Cova, 2021; Keinan & Kivetz, 2011; Scott et al., 2017).

We focus specifically on eudaimonic well-being, living a life imbued with meaning, purpose, and psychological fulfillment (Huta & Waterman, 2014; Demeter et al., 2023; Luchs et al., 2021; Williams et al., 2022), as a core outcome of interest. This form of well-being is particularly relevant for understanding whether suffering contributes to or detracts from the deeper value of consumption experiences. While well-being is central to how suffering affects consumers, its impact on motivation and repurchase intention is equally important. Keinan and Kivetz (2011) suggest that suffering through experiential purchases may be perceived as a "collectable" experience (i.e., tried once but not repeated), while Loewenstein (1999) and Cova (2021) argue that experiential suffering can foster a desire for mastery and re-engagement. Conversely, Nicolao et al. (2009) find that negative outcomes from material purchases tend to fade more quickly. We argue that both material and experiential purchases are shaped by goal pursuit, which determines whether suffering is perceived as a necessary part of achieving a valued outcome or as an unwelcome obstacle (Higgins, 1997; Higgins et al., 2020).

Recent research suggests that suffering can take on different meanings for consumers, sometimes enhancing well-being or re-engagement when it holds personal significance (Bloom, 2022; Kastanakis et al., 2022). This raises further questions about how suffering may differently influence repurchase intention in material versus experiential contexts. In material purchases, where suffering is often incidental to acquisition, the experience may lack inherent meaning. In contrast, experiential purchases tend to align with intrinsic motivations, where suffering is integrated into the experience itself (Weingarten et al., 2023).

Intrinsic motivation, driven by autonomy, competence, and relatedness, plays a key role in how consumers pursue their goals (Deci & Ryan, 2008). These motivations range from external influences like rewards or punishments to internal drivers such as personal pride or values (Barbopoulos & Johansson, 2017; Higgins et al., 2020). Because material purchases often emphasize control and acquisition, suffering may be especially misaligned with these goals, reducing consumers' sense of autonomy and competence. Self-determination theory (Deci & Ryan, 1980) offers a framework for understanding how intrinsic motivation—spanning from introjected (e.g., pride or shame) to integrated (aligned with identity)—guides goal selection and pursuit (Higgins et al., 2020).

Prior research has emphasized the positive role of effort in enhancing value through mechanisms such as effort justification, investment effects, and goal pursuit (e.g., Bastos, 2020; Garcia-Rada et al., 2022; Kim & Labroo, 2011). However, less is known about when negatively valenced effort, such as suffering, may backfire and reduce perceived value (Rocklage & Fazio, 2020). We address this by examining how suffering undermines key psychological needs and produces negative downstream effects across product types. Our research extends self-determination theory by showing that suffering in material purchases disrupts core psychological needs, thereby weakening intrinsic motivation (Deci & Ryan, 1980). We also contribute to goal pursuit theory by demonstrating that suffering is more likely to disrupt goal attainment in material contexts (Bauer et al., 2019), while experiential purchases, shaped by both process and outcome (Pagliarini, 2015; Patterson & Schroeder, 2010; Bagozzi & Dholakia, 1999; Touré-Tillery & Fishbach, 2018), are more resilient. Finally, our findings advance the literature on eudaimonic well-being by showing that suffering in material purchases diminishes perceived well-being (Huta & Waterman, 2014; Williams et al., 2022), whereas experiential purchases appear insulated from such negative effects.

We investigate whether suffering (vs. control) in material purchases reduces well-being (Study 1), which may in turn affect repurchase intention (Studies 2a and 2b), compared to experiential purchases. We examine whether suffering (vs. control) influences intrinsic motivation and well-being in either material or experiential contexts, and whether these effects help explain repurchase intention through a serial mediation pathway (Study 3).

2. Theoretical foundation

2.1. Suffering's differential impact on consumer outcomes across product types

While most consumption situations involve some degree of effort, suffering represents a significantly heightened form, particularly when paired with negative valence. Negative affective states, such as unpleasantness, can amplify perceptions of effort, transforming what might otherwise be an uncomfortable experience into something distinctly aversive (Inzlicht & Campbell, 2022). Prior research defines consumer suffering as an aversive form of effort that pushes individuals beyond their comfort zones, often involving physical pain or emotional distress (Inzlicht & Campbell, 2022; Loewenstein, 1999; Olivola & Shafir, 2013; Keinan & Kivetz, 2011; Scott et al., 2017; Kastanakis et al., 2022). Accordingly, we define suffering as significant effort paired with negative valence (unpleasantness), varying in intensity from difficult to painful experiences (Bloom, 2022; Inzlicht & Campbell, 2022; Olivola & Shafir, 2013). Some tasks may be challenging but not aversive (Inzlicht & Campbell, 2022), while others may feel stimulating or rewarding (Keinan & Kivetz, 2011). However, when effort is experienced as unpleasant, suffering emerges. Individual pain thresholds influence how these experiences are interpreted; what one consumer finds painful, another may find stimulating. Thus, suffering exists on a spectrum, shaped by personal resilience and contextual factors.

A distinction exists between intentional and unintentional suffering. Intentional suffering, such as discomfort during challenging activities, is often interpreted as meaningful (Keinan & Kivetz, 2011; Olivola & Shafir, 2013). In contrast, unintentional suffering, such as frustration during a purchase, lacks perceived meaning and tends to be viewed negatively (González-Gómez et al., 2021). Socially framed suffering, like running a marathon, may appear painful to outsiders, yet participants often reframe it as a meaningful personal challenge (Bloom, 2022). While physical or mental effort can lead to suffering (Inzlicht & Campbell, 2022), it can also imbue experiences with meaning. For instance, Loewenstein (1999) highlights extreme hardships, such as mountaineering, as experiences that push individuals to their limits. Olivola and Shafir (2013) show that suffering through pain and effort (i.e., participating in a charity run) can enhance an experience's perceived value. Similarly, Keinan and Kivetz (2011) find that consumers willingly endure discomfort, such as cold weather or difficult travel, to create collectable, identity-shaping experiences.

Our research builds on prior work by examining how suffering differs based on consumption goals. Material consumption, which involves acquiring physical goods like clothing or electronics (Kumar et al., 2014; Nicolao et al., 2009), typically involves suffering during the acquisition process, such as dealing with poor customer service or transporting heavy items. This effort is often perceived as a barrier to ownership (Cutright & Samper, 2014). Because the value of material goods stems from possession, any unpleasant effort that hinders acquisition may reduce satisfaction and discourage future purchases. In contrast, experiential consumption centers on life-enhancing activities like travel or dining (Kumar & Gilovich, 2015), where discomfort (i.e., enduring a challenging hike) is often embedded in the experience itself (Keinan & Kivetz, 2011; Cova, 2021) and valued for the personal growth and lasting memories it provides (Bastos & Moore, 2021). Thus, while suffering in material consumption may undermine well-being and repurchase, it can enhance experiential consumption when viewed as part of a meaningful journey.

For suffering to contribute meaningfully to eudaimonic well-being, it must hold significance beyond mere exertion (Murphy & Bastian, 2020; Martela & Steger, 2016). Eudaimonic well-being is characterized by the pursuit of personal growth, self-realization, and purpose, rather than

fleeting pleasure (Huta & Waterman, 2014; Luchs et al., 2021). While the meaningfulness of suffering has been explored (Cova, 2021; Murphy & Bastian, 2020; Olivola & Shafir, 2013; Kastanakis et al., 2022; Scott et al., 2017), empirical studies examining how suffering aligns with eudaimonic goals remain limited. In this context, purpose plays a central role in shaping how suffering is interpreted. A sense of purpose provides a framework for pursuing long-term, meaningful objectives (Baumeister, 1991; George & Park, 2013). Bloom (2022) suggests that suffering may foster introspection, encouraging individuals to reflect on life purpose. This process supports eudaimonic well-being by linking adversity to goals that contribute to a fulfilling life (Martela & Steger, 2016).

The relationship between suffering and eudaimonic well-being depends on the nature of the consumption goal. In material purchases, where ownership is the primary aim, suffering is typically perceived as an unnecessary obstacle that detracts from well-being. The negative emotions associated with this effort offer little opportunity for personal growth, thereby diminishing well-being. In contrast, experiential purchases often incorporate suffering as part of a meaningful pursuit; overcoming adversity contributes to a sense of accomplishment and personal growth. In such cases, suffering aligns more closely with eudaimonic goals, fostering well-being through the creation of valuable, memorable experiences (Keinan, 2007; Bloom, 2022). This distinction in how suffering is experienced across product types leads to the following hypothesis:

H1: Suffering (vs. control) reduces well-being in material product contexts, but not in experiential product contexts.

Because material goods are primarily valued for their utility, status, or ownership (Kumar et al., 2014; Nicolao et al., 2009), suffering encountered during acquisition is often seen as an unwanted byproduct that offers no added meaning. This perception can evoke negative emotions, undermining well-being and reducing consumers' desire to re-engage with the product (Loewenstein, 1999; Bloom, 2022). Thus, suffering in material consumption likely diminishes repurchase intention by negatively impacting well-being:

H2: Suffering (vs. control) reduces repurchase intention in material product contexts, but not in experiential product contexts; this effect is mediated by a decrease in well-being.

2.2. Suffering and intrinsic motivation across product types

Understanding how goal pursuit shapes motivation requires distinguishing between intrinsic and extrinsic forms. Intrinsic motivation refers to actions undertaken for their inherent satisfaction rather than external rewards (Ryan & Deci, 2000). According to self-determination theory, motivation exists on a continuum, from external incentives (e.g., rewards or punishments) to fully integrated intrinsic motivations. When basic psychological needs (autonomy, competence, and relatedness) are met, intrinsic motivation emerges, prompting individuals to engage in activities they find inherently fulfilling (Deci & Ryan, 1980). This form of motivation is central to goal-directed behavior because it emphasizes immediate satisfaction from the activity itself (Renninger, 2000; Harackiewicz & Elliot, 1993; Zhong & Mitchell, 2010). Intrinsic motivation is self-sustaining, driven by growth, mastery, and connection, rather than external markers like wealth or recognition (Kasser & Ryan, 1996). It is rooted in meaningful engagement, not dependent on validation from others (Lalot et al., 2019).

Suffering can be closely tied to intrinsic motivation, particularly in the pursuit of meaningful goals. When individuals willingly endure discomfort, that suffering may be viewed as valuable, reflecting personal growth or mastery (Bloom, 2022; Murphy & Bastian, 2020). Unlike extrinsic motivation, which is driven by external rewards, goals involving suffering are grounded in personal values, where the process is often as meaningful as the outcome. Enduring such effort can foster autonomy, competence, and relatedness, thereby reinforcing intrinsic motivation (Deci & Ryan, 1980).

The nature of the goal, whether material or experiential, significantly shapes how suffering influences intrinsic motivation. In experiential purchases, where suffering is often integral to the experience, intrinsic motivation can flourish. Challenging activities like hikes or immersive travel satisfy psychological needs by requiring individuals to overcome adversity, thereby enhancing the experience's intrinsic value (Murphy & Bastian, 2020; Olivola & Shafir, 2013). In these contexts, suffering is not a barrier but an enriching component of the journey, adding depth and fulfillment (Weingarten et al., 2023). In contrast, suffering in material purchases is typically incidental, arising from inconveniences such as long waits or poor service, and disconnected from intrinsic motivations. Because the goal in material consumption is ownership or acquisition, such suffering is viewed as an undesirable obstacle rather than a meaningful part of the experience (Vansteenkiste et al., 2008). This lack of engagement undermines intrinsic motivation, as the effort fails to satisfy psychological needs like autonomy or competence.

Although material purchases can sometimes reflect personal goals or symbolic meaning, such as buying a home to signal security or accomplishment, these are specific cases in which the material good transcends its utilitarian function. Consumers may attach sentimental value to possessions because of the effort or suffering endured during acquisition. For instance, a house bought after significant financial hardship may carry intense meaning despite being a recent purchase. However, material consumption generally centers on utility and ownership (Kumar et al., 2014), where suffering is more often perceived as a barrier to satisfaction rather than a meaningful component of value. In contrast, experiential consumption frequently aligns with personal growth, with suffering reframed as part of the journey. Discomfort during a hike, for example, can enhance the sense of accomplishment. While both types of purchases can hold personal significance, suffering in material contexts tends to reduce intrinsic motivation and satisfaction, whereas in experiential contexts, it can maintain fulfilment and personal development.

While suffering can be meaningful in certain contexts (Bloom, 2022; Kastanakis et al., 2022), material purchases generally lack the connection to personal development that experiential purchases provide. In rare instances where material goods are tied to meaningful personal goals, the suffering involved in acquiring them may enhance their perceived value. However, material consumption typically does not support intrinsic motivation, which in turn diminishes well-being and ultimately reduces repurchase intention. We propose:

H3: In material product contexts (but not experiential), suffering (vs. control) reduces (a) intrinsic motivation, which subsequently reduces (b) well-being, and in turn decreases (c) repurchase intention.

3. Overview of studies

The four experimental studies investigate how suffering, defined as significant effort coupled with negative valence (Bastos, 2020), impacts intrinsic motivation, well-being, and repurchase intention, with product type (material vs. experiential) serving as a moderator. Material products refer to tangible goods for ownership (Kumar et al., 2014), while experiential products encompass activities valued for the experiences they provide (Kumar & Gilovich, 2015). Our use of the terms material and experiential product types aligns with prior literature (e.g., Carter & Gilovich, 2012; Kumar & Gilovich, 2016), while recognizing that these categories may also reflect distinct goal acquisition profiles. Well-being is tied to achieving meaningful life goals (Luchs et al., 2021; Su et al., 2014), and repurchase intention reflects the willingness to re-engage with a product (Bastos & Moore, 2021). We hypothesize that suffering negatively impacts these outcomes, specifically for material products.

Study 1 tests H1, showing that for material products, suffering (vs. control) significantly reduces well-being, while experiential products remain unaffected. Studies 2a and 2b extend the findings by testing H2, demonstrating that for material products, suffering (vs. control) reduces

Table 1
Summary of Studies.

Study 1 (N = 300, 50.7 % Female, *Mage* = 35.39, SD = 12.04, Prolific)		
DV: Well-being; 7-point scale	IV: Control (N = 147)	IV: Suffer (N = 153)
W: Material; F = 13.27, *p* < 0.001	**5.05**	**4.15**
W: Experiential; F = 3.86, *p* > 0.05	4.77	5.22
Main Findings: In the material condition, suffering (vs. control) reduces well-being.		
Study 2a (N = 429, 50.6 % Female, *Mage* = 39.05, SD = 12.74, CloudResearch)		
DV: Well-being; 7-point scale	IV: Control (N = 217)	IV: Suffer (N = 212)
W: Material; F = 16.05, *p* < 0.001	**4.46**	**3.64**
W: Experiential; F = 0.49, *p* > 0.05	4.29	4.15
DV: Repurchase Intention; 7-point scale	IV: Control (N = 217)	IV: Suffer (N = 212)
W: Material; F = 27.53, *p* < 0.001	**4.74**	**3.52**
W: Experiential; F = 2.44, *p* > 0.05	4.67	4.30
M: Suffering → Well-being → Repurchase Intention; B = 0.46, SE = 0.20, 95 % CI: [0.06, 0.87]		
Material: B = -0.56, SE = 0.13, 95 % CI excluding zero [-0.84, -0.29]		
Experiential: B = -0.09, SE = 0.14, 95 % CI including zero [-0.39, 0.19]		
Main Findings: In the material condition, suffering (vs. control) reduces well-being, subsequently reducing repurchase intention.		
Study 2b (N = 394, 49.5 % Female, *Mage* = 38.82, SD = 12.94, CloudResearch)		
DV: Well-being; 7-point scale	IV: Control (N = 203)	IV: Suffer (N = 191)
W: Material; F = 19.63, *p* < 0.001	**5.40**	**4.81**
W: Experiential; F = 0.15, *p* > 0.05	5.45	5.40
DV: Repurchase Intention; 7-point scale	IV: Control (N = 203)	IV: Suffer (N = 191)
W: Material; F = 13.19, *p* < 0.001	**5.54**	**4.89**
W: Experiential; F = 0.30, *p* > 0.05	5.34	5.25
M: Suffering → Well-being → Repurchase Intention; B = 0.31, SE = 0.11, 95 % CI: [0.10, 0.53]		
Material: B = -0.34, SE = 0.08, 95 % CI excluding zero [-0.51, -0.18]		
Experiential: B = -0.02, SE = 0.07, 95 % CI including zero [-0.18, 0.12]		
Main Findings: In the material condition, suffering (vs. control) reduces well-being, subsequently reducing repurchase intention.		
Study 3 (N = 487, 49.3 % Female, *Mage* = 40.3, SD = 13.16, CloudResearch)		
DV: Intrinsic Motivation; 7-point scale	IV: Control (N = 256)	IV: Suffer (N = 231)
W: Material; F = 20.8, *p* < 0.001	**5.31**	**4.43**
W: Experiential; F = 0.07, *p* > 0.05	4.97	4.91
DV: Well-being; 7-point scale	IV: Control (N = 256)	IV: Suffer (N = 231)
W: Material; F = 7.60, *p* < 0.05	**5.75**	**5.36**
W: Experiential; F = 1.52, *p* > 0.05	5.70	5.87
DV: Repurchase Intention; 7-point scale	IV: Control (N = 256)	IV: Suffer (N = 231)
W: Material; F = 21.57, *p* < 0.001	**5.22**	**4.28**
W: Experiential; F = 1.19, *p* > 0.05	5.28	5.06
M: Suffering → Intrinsic Motivation → Well-being → Repurchase Intention; B = 0.20, SE = 0.07, 95 % CI: [0.06, 0.37]		
Material: B = -0.22, SE = 0.06, 95 % CI excluding zero [-0.35, -0.11]		
Experiential: B = -0.01, SE = 0.04, 95 % CI including zero [-0.10, 0.08]		
Main Findings: In the material condition, suffering (vs. control) reduces intrinsic motivation and well-being, which in turn lowers repurchase intention.		

well-being, which in turn diminishes repurchase intention. Study 3 examines H3, showing that for material products, suffering (vs. control) lowers intrinsic motivation, which subsequently reduces well-being and repurchase intention. Across all studies, suffering in the context of material purchases consistently decreases intrinsic motivation, well-being, and repurchase intention, while experiential purchases remain resilient to these negative effects. Table 1 summarizes the findings, and Fig. 1 illustrates the conceptual model.

4. Study 1

The purpose of Study 1 is to examine how recalling experiences involving effort alone (control) versus effort combined with unpleasantness (suffering) in material (acquiring physical goods) versus experiential (acquiring experiences) contexts affects participants' well-being. Participants recalled past material or experiential purchases, consistent with prior research (Murphy & Bastos, 2020). Recalling these purchases evokes emotions and self-relevant content, helping participants re-engage with the suffering experience (Gilovich & Gallo, 2020).

4.1. Method

We recruited 300 U.S. participants (M_{age} = 35.39, SD = 12.04; 50.7 % female) through Prolific (Palan & Schitter, 2018). No participants failed the attention check. This sample size was sufficient to detect a medium-to-small effect ($f^2 \approx 0.02$) with power = 0.80 and α = 0.05. The study employed a 2 (suffering: control vs. suffering) x 2 (product type: material vs. experiential) between-subjects design.

Participants recalled a time when they either exerted effort alone (control) or exerted significantly more effort while enduring something unpleasant (suffering) to acquire either a product (material) or an experience (experiential), based on previous research (Murphy & Bastian, 2020; Van Boven & Gilovich, 2003). This design ensures that suffering, defined as heightened effort combined with negative valence, is clearly differentiated from the typical effort exerted in the control condition. They described the situation in one sentence (see appendix for this study and all subsequent studies). Afterward, participants completed a four-item, 7-point perceived well-being scale (1 = "Strongly disagree", 7 = "Strongly agree"), with items: "The situation helped achieve some life goals," "What I did in the situation is valuable and worthwhile," "The situation had a clear sense of purpose," and "The situation helped me realize that I can succeed if I put my mind to it" (α = 0.85; Luchs et al., 2021; Su et al., 2014). Manipulation checks assessed effort ("My example included high effort": yes or no), valence ("My situation was pleasant": 7-point scale), and product type ("My example was related to… an experience I had or a product I acquired") (Murphy & Bastian, 2020; Kumar et al., 2014). Demographic questions (age and gender) were collected, and participants were debriefed.

4.2. Results

Manipulation checks. Participants in the suffering condition reported higher effort (88.2 %) compared to the control condition (10.2 %; $\chi2(1) = 182.59$, $p < 0.001$) and rated their experience as less pleasant (M = 4.91, SD = 1.62 vs. M = 5.23, SD = 1.40; $t(298) = 3.28$, $p < 0.05$). Those in the material condition were more likely to report their example as product-related (85.6 %) than those in the experiential condition (10.6 %; $\chi2(1) = 169.55$, $p < 0.001$).

Well-being. An ANOVA examined the interaction between suffering (control vs. suffering) and product type (material vs. experiential) on well-being. There was a main effect of product type, with experiential purchases having a more positive impact on well-being than material ones ($F(1, 296) = 5.62$, $p < 0.05$, $\eta_p^2 = 0.02$), but no main effect of suffering ($F(1, 296) = 1.76$, $p > 0.05$, $\eta_p^2 = 0.00$). Most important, there was a significant interaction between suffering and product type ($F(1, 296) = 16.06$, $p < 0.001$, $\eta_p^2 = 0.05$). Pairwise comparisons (LSD) showed that in the material condition, suffering significantly decreased well-being (M = 4.15) compared to control (M = 5.05; $F(1, 296) = 13.27$, $p < 0.001$, $\eta_p^2 = 0.05$). However, in the experiential condition, suffering did not significantly impact well-being (M = 5.22) compared to control (M = 4.77; $F(1, 296) = 3.86$, $p > 0.05$, $\eta_p^2 = 0.01$). This supports H1. See Fig. 2.

5. Study 2

The purpose of Study 2 is to manipulate both suffering and product type across two distinct contexts, addressing the recall-based limitations of Study 1 through a controlled experimental setup. Study 2a focuses on a TV purchase, framed either as an experiential product (emphasizing

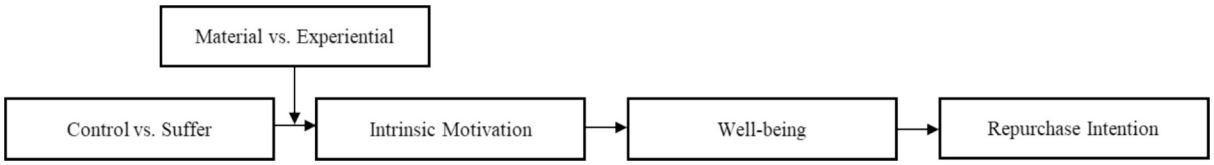

Fig. 1. Conceptual Model.

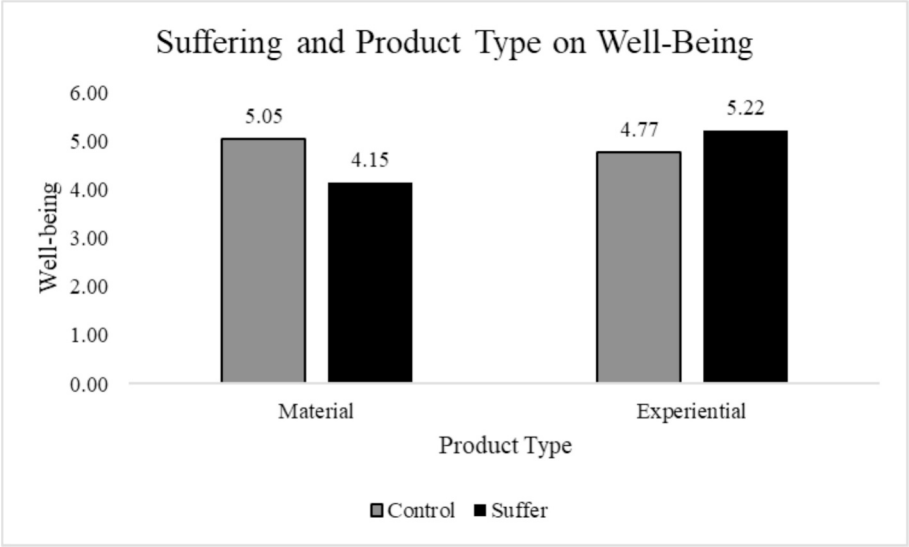

Fig. 2. Interaction between suffering (control versus suffering) and product type (material versus experiential) in predicting well-being (Study 1), based on estimated marginal means.

the experiences the TV enables) or a material product (emphasizing the TV as a possession) (Carter & Gilovich, 2012; Gilovich et al., 2015). Study 2b centers on a trip, framed either as experiential (engaging in activities) or material (shopping for goods) (Gilovich et al., 2015; Kumar & Gilovich, 2016). In both studies, participants are exposed to either a control condition (effort only) or a suffering condition (effort plus unpleasantness) (Bastos, 2020). By using these different contexts, the studies aim to generalize the effects of suffering while testing whether reduced well-being impacts repurchase intentions. These experiments extend the findings of Study 1 and offer additional evidence for the differential effects of suffering across material and experiential purchases.

5.1. Study 2a

5.1.1. Method

We recruited 429 U.S. participants (M_{age} = 39.05, SD = 12.74; 50.6 % female) via CloudResearch (Litman et al., 2017). One participant failed the attention check and was removed. This sample size was sufficient to detect a medium-to-small effect size ($f^2 \approx 0.02$) with power = 0.80 and $\alpha = 0.05$. The study employed a 2 (suffering: control vs. suffering) × 2 (product type: material vs. experiential) between-subjects design.

Participants were randomly assigned to conditions. They imagined either a scenario involving suffering (waiting in cold weather) or a control condition (waiting in line without discomfort) to purchase a virtual reality TV (adapted from Bastos, 2020; Keinan & Kivetz, 2011). The description guided participants to focus on either the TV's material aspects (e.g., where it would go in their home, how well it would fit with their other possessions) or its experiential aspects (e.g., what it would be like to watch TV "in a whole new way," how it would complement other activities; Carter & Gilovich, 2012; Gilovich et al., 2015). Afterward, participants completed a one-item, 7-point (1 = "Strongly disagree", 7 = "Strongly agree") repurchase intention scale: "I would repeat the same scenario if I wanted a new TV" (adapted from Bastos & Moore, 2021), and the same four-item well-being scale from Study 1 ($\alpha = 0.88$), adapted to the scenario (e.g., "Getting the TV would help me achieve some goals").

Manipulation checks assessed effort (1= "Low effort", 7 = "High effort"), valence (1 = "Very unpleasant", 7 = "Very pleasant") and product type (1 = "Material product", 7 = "Experiential product") (Murphy & Bastian, 2020; Kumar & Gilovich, 2016). Participants also indicated the monetary value they assigned to the TV using a slider ($0 to $2500), and their involvement in TV products (1 = "Low involvement", 7 = "High involvement"). Finally, demographic information (age, gender) was collected, and participants were debriefed.

5.1.2. Results

Manipulation checks. Participants in the suffering condition rated the experience as significantly less pleasant (M = 5.43, SD = 2.35) compared to the control condition (M = 6.97, SD = 1.99; t(427) = 7.34, $p < 0.001$) and as requiring more effort (M = 5.54, SD = 1.92 vs. M = 4.68, SD = 2.04; t(427) = -4.46, $p < 0.001$). Those in the material condition rated the product as less experiential (M = 4.14, SD = 2.36) than those in the experiential condition (M = 4.63, SD = 2.50; t(427) = -2.06, $p < 0.05$).

Controls. The value the participants assigned to the TV set did not differ between the material (M = 804.25, SD = 470.99) and experiential conditions (M = 853.95, SD = 515.74; t(427) = -1.04, $p > 0.05$). Involvement in TV products did not differ between the material (M = 3.54, SD = 1.97) and experiential conditions (M = 3.73, SD = 2.00; t (427) = -1.88, $p > 0.05$).

Well-being. An ANOVA examined the interaction between suffering (control vs. suffering) and product type (material vs. experiential) on well-being. There was a main effect of suffering, with participants in the

control condition reporting significantly higher well-being than those in the suffering condition ($F(1, 425) = 11.06$, $p < 0.001$, $\eta_p^2 = 0.02$). No main effect of product type was found ($F(1, 425) = 1.45$, $p > 0.05$, $\eta_p^2 = 0.00$). Most important, a significant interaction between suffering and product type emerged ($F(1, 425) = 5.45$, $p < 0.05$, $\eta_p^2 = 0.01$). Pairwise comparisons (LSD) revealed that in the material condition, suffering significantly decreased well-being ($M = 3.64$) compared to control ($M = 4.46$; $F(1, 425) = 16.05$, $p < 0.001$, $\eta_p^2 = 0.04$). However, in the experiential condition, suffering did not significantly affect well-being ($M = 4.15$) compared to control ($M = 4.29$; $F(1, 425) = 0.49$, $p > 0.05$, $\eta_p^2 = 0.00$). Including value and involvement as covariates did not change the results. See Fig. 3.

Repurchase intention. An ANOVA examined the interaction between suffering (control vs. suffering) and product type (material vs. experiential) on repurchase intention. There were main effects of both suffering and product type. Participants in the control condition reported higher repurchase intention than those in the suffering condition ($F(1, 425) = 23.16$, $p < 0.001$, $\eta_p^2 = 0.05$), and those in the experiential condition reported higher repurchase intention than those in the material condition ($F(1, 425) = 4.66$, $p < 0.05$, $\eta_p^2 = 0.01$). Most important, there was a significant interaction between suffering and product type ($F(1, 425) = 6.76$, $p < 0.05$, $\eta_p^2 = 0.02$). Pairwise comparisons (LSD) showed that in the material condition, suffering significantly reduced repurchase intention ($M = 3.52$) compared to control ($M = 4.74$; $F(1, 425) = 27.53$, $p < 0.001$, $\eta_p^2 = 0.06$). In the experiential condition, suffering did not significantly affect repurchase intention ($M = 4.30$) compared to control ($M = 4.67$; $F(1, 425) = 2.44$, $p > 0.05$, $\eta_p^2 = 0.00$). See Fig. 4.

Moderated mediation. We conducted a PROCESS Macro (Hayes, 2022) moderated mediation analysis (model 7, 10,000 bootstraps) with the suffering condition (control = 0, suffering = 1) as the independent variable, product type (material = 0, experiential = 1) as moderator, well-being as mediator, and repurchase intention as the dependent variable. The index of moderated mediation was significant ($B = 0.46$, $SE = 0.20$, 95 % CI: [0.06, 0.87]). The conditional indirect effects indicated that, in the material condition, suffering had a negative indirect effect, via reduced well-being, on repurchase intention ($B = -0.56$, $SE = 0.13$, 95 % CI: [-0.84, -0.29]). In contrast, in the experiential condition, the indirect effect of suffering on repurchase intention via well-being was not significantly different from zero ($B = -0.09$, $SE = 0.14$, 95 % CI: [-0.39, 0.19]). This supports H2.

5.2. Study 2b

5.2.1. Method

We recruited 394 U.S. participants ($M_{age} = 38.82$, $SD = 12.94$; 49.5 % female, 0.3 % gender diverse) via CloudResearch (Litman et al., 2017). Six participants failed the attention check and were removed. This sample size was sufficient to detect a medium-to-small effect size ($f^2 \approx 0.02$) with power = 0.80 and $\alpha = 0.05$. The study employed a 2 (suffering: control vs. suffering) × 2 (product type: material vs. experiential) between-subjects design.

Participants were randomly assigned to conditions. They imagined a trip either involving suffering (unpleasantly cold weather in addition to planning effort) or no suffering (control: effort only in planning) (adapted from Keinan & Kivetz, 2011). They also were randomly assigned to the condition of acquiring material goods (e.g., souvenirs) or having experiences (e.g., visiting museums) during the trip (Gilovich & Kumar, 2015). Afterward, participants completed the same four-item well-being scale from Study 1, adapted to this scenario (e.g., "Going on the trip will help me achieve some goals"; $\alpha = 0.77$), and a one-item, 7-point repurchase intention scale: "I would repeat the same trip if I was going more than once" (adapted from Bastos & Moore, 2021).

Participants then completed manipulation checks for suffering and product type (as in prior studies), as well as involvement and a monetary value assessment (as in Study 2a). Finally, demographic information (age, gender) was collected, and participants were debriefed.

5.2.2. Results

Manipulation checks. Participants in the suffering condition rated the experience as significantly less pleasant ($M = 5.22$, $SD = 1.32$) compared to the control condition ($M = 5.83$, $SD = 1.08$; $t(392) = 4.99$, $p < 0.001$). Those in the suffering condition also rated the experience as requiring significantly more effort ($M = 5.94$, $SD = 1.40$) compared to the control condition ($M = 5.54$, $SD = 1.73$; $t(392) = -2.86$, $p < 0.05$). Participants in the material condition rated the outcome as less focused on facilitating an experience ($M = 5.69$, $SD = 2.36$) compared to those in the experiential condition ($M = 6.09$, $SD = 1.03$; $t(392) = -8.06$, $p < 0.001$).

Controls. The value the participants assigned to the trip did not differ between the material ($M = 2673.05$, $SD = 2266.94$) and experiential conditions ($M = 2343.95$, $SD = 1711.35$; $t(392) = 1.62$, $p > 0.05$).

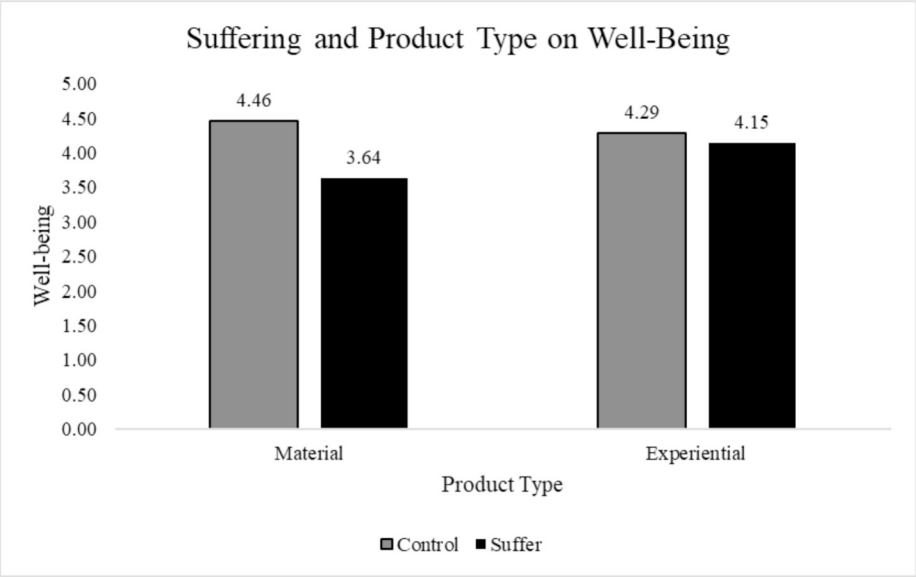

Fig. 3. Interaction between suffering (control versus suffering) and product type (material versus experiential) in determining well-being (Study 2a), based on estimated marginal means.

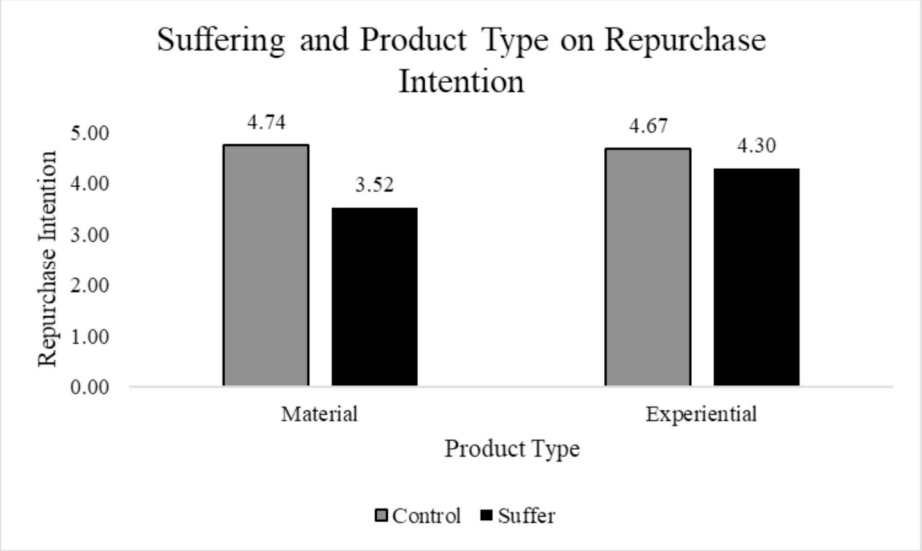

Fig. 4. Interaction between suffering (control versus suffering) and product type (material versus experiential) in determining repurchase intention (Study 2a), based on estimated marginal means.

Involvement in tourism did not differ between the material (M = 5.51, SD = 1.59) and experiential conditions (M = 5.62, SD = 1.44; t(392) = -0.71, p > 0.05).

Well-being. An ANOVA examined the interaction between suffering (control vs. suffering) and product type (material vs. experiential) on well-being. There were main effects of both suffering and product type. Participants in the control condition reported significantly higher well-being than those in the suffering condition (F(1, 390) = 11.93, p < 0.001, η_p^2 = 0.03), and those in the experiential condition reported significantly higher well-being than those in the material condition (F(1, 390) = 11.34, p < 0.001, η_p^2 = 0.03). Most important, a significant interaction between suffering and product type was found (F(1, 390) = 8.49, p < 0.05, η_p^2 = 0.02). Pairwise comparisons (LSD) showed that in the material condition, suffering significantly reduced well-being (M = 4.81) compared to control (M = 5.40; F(1, 390) = 19.63, p < 0.001, η_p^2 = 0.05). In the experiential condition, suffering did not significantly affect well-being (M = 5.40 vs. M = 5.45; F(1, 390) = 0.15, p > 0.05, η_p^2 = 0.00). Including value and involvement as covariates did not change the results. See Fig. 5.

Repurchase intention. An ANOVA examined the interaction between suffering (control vs. suffering) and product type (material vs. experiential) on repurchase intention. There was a main effect of suffering, with participants in the control condition reporting significantly higher repurchase intention than those in the suffering condition (F(1, 390) = 8.98, p < 0.05, η_p^2 = 0.02). No main effect of product type was found (F(1, 390) = 0.40, p > 0.05, η_p^2 = 0.00). Most important, there was a significant interaction between suffering and product type (F(1, 390) = 4.94, p < 0.05, η_p^2 = 0.01). Pairwise comparisons (LSD) revealed that in the material condition, suffering significantly reduced repurchase intention (M = 4.89) compared to control (M = 5.54; F(1, 390) = 13.19, p < 0.001, η_p^2 = 0.03). In the experiential condition, suffering did not significantly affect repurchase intention (M = 5.25 vs. M = 5.34; F(1, 390) = 0.30, p > 0.05, η_p^2 = 0.00). See Fig. 6.

Moderated mediation. We conducted a PROCESS Macro moderated mediation analysis (Hayes, 2022; model 7, 10,000 bootstraps) with the suffering condition (control = 0, suffering = 1) as the independent

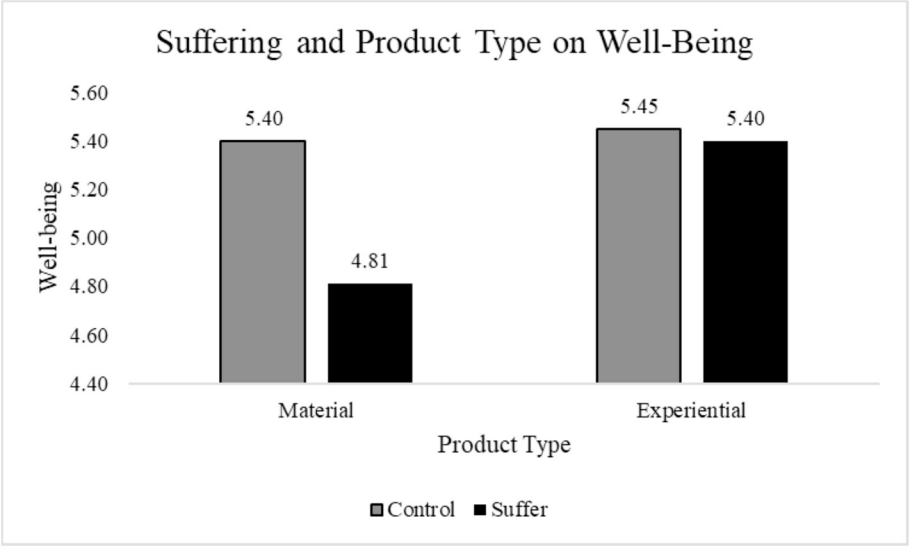

Fig. 5. Interaction between suffering (control vs. suffering) and product type (material vs. experiential) in determining well-being (Study 2b), based on estimated marginal means.

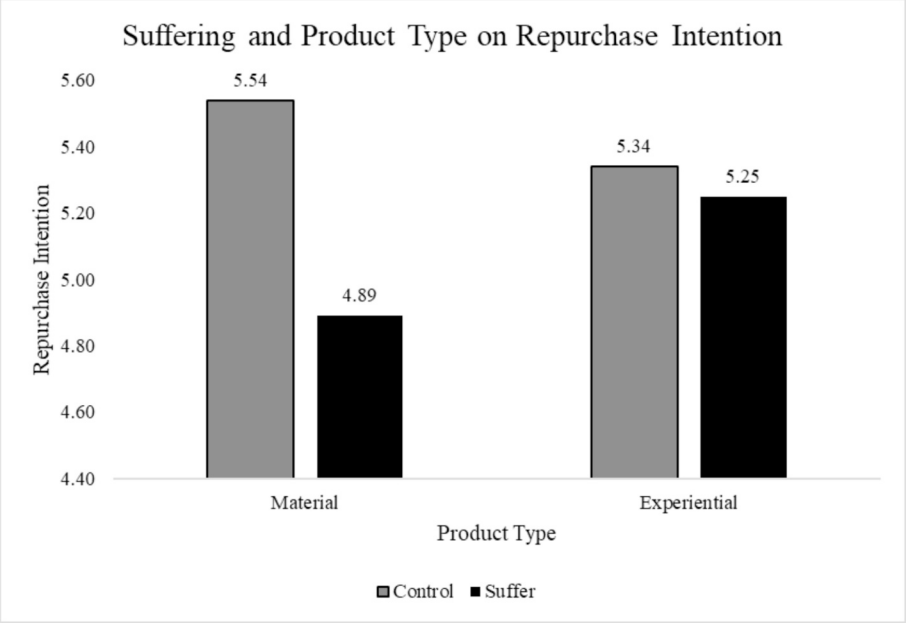

Fig. 6. Interaction between suffering (control vs. suffering) and product type (material vs. experiential) in determining repurchase intention (Study 2b), based on estimated marginal means.

variable, product type (material = 0, experiential = 1) as moderator, well-being as mediator, and repurchase intention as the dependent variable. The index of moderated mediation was significant (B = 0.31, SE = 0.11, 95 % CI: [0.10, 0.53]). The conditional indirect effects indicated that, in the material condition, suffering had a negative indirect effect, via reduced well-being, on repurchase intention (B = -0.34, SE = 0.08, 95 % CI: [-0.51, -0.18]). In contrast, in the experiential condition, the indirect effect of suffering on repurchase intention via well-being was not significantly different from zero (B = -0.02, SE = 0.07, 95 % CI: [-0.18, 0.12]). This provides further support for H2.

6. Study 3

The purpose of Study 3 is to extend the findings on suffering and product type by examining their effects in a more personal context, joining a running club (Olivola & Shafir, 2013), and to test the full model, with intrinsic motivation and well-being as serial mediators of repurchase intention (H3). Extrinsic motivation was also evaluated but did not mediate the effects.

6.1. Method

We recruited 487 U.S. participants (M_{age} = 40.30, SD = 13.16; 49.3 % female, 0.4 % gender diverse) via CloudResearch (Litman et al., 2017). Thirteen participants failed the attention check and were removed. This sample size was sufficient to detect a medium-to-small effect size ($f^2 \approx 0.02$) with power = 0.80 and α = 0.05. The study employed a 2 (suffering: control vs. suffering) x 2 (product type: material vs. experiential) between-subjects design.

Participants were randomly assigned to conditions. They imagined either completing a 5-mile run in cold weather (suffering) or under normal conditions (control) (Olivola & Shafir, 2013). Participants then imagined receiving either a commemorative t-shirt (material condition) or a digital image to remember the experience (experiential condition) (adapted from Carter & Gilovich, 2012; Kumar & Gilovich, 2016; Kumar et al., 2014).

Afterward, participants completed the same 4-item, 7-point well-being measure used in Study 1, adapted for this context (e.g., "Doing the run would help me achieve some goals"; α = 0.90). Repurchase intention was measured using a single 7-point scale item: "I would repeat the run in the same scenario if provided the opportunity" (Olivola & Shafir, 2013). Intrinsic motivation was assessed using three 7-point items (1 = "Strongly disagree", 7 = "Strongly agree"): "I think that this activity is enjoyable," "I feel a sense of accomplishment when thinking about the run," and "I think that this activity would be fun and engaging" (adapted from Ryan & Deci, 2000; α = 0.89). Participants completed the same manipulation checks for suffering and product type, involvement, and value from Study 2a/2b, followed by demographic questions (age and gender) and were debriefed.

6.2. Results

Manipulation checks. Participants in the suffering condition rated the experience as significantly less pleasant (M = 3.39, SD = 1.70) compared to those in the control condition (M = 4.33, SD = 1.58; t(485) = 6.26, p < 0.001). Similarly, participants in the suffering condition reported significantly more effort (M = 6.68, SD = 1.43) than those in the control condition (M = 6.40, SD = 1.52; t(485) = -2.11, p < 0.05). Participants in the material condition rated the outcome of the run as less focused on facilitating an experience (M = 5.94, SD = 2.09) compared to those in the experiential condition (M = 6.86, SD = 1.57; t(485) = -5.48, p < 0.001).

Controls. The value participants assigned to the products did not significantly differ between the material (M = 22.79, SD = 21.07) and experiential conditions (M = 26.54, SD = 26.94; t(485) = -1.71, p > 0.05). Involvement in running was also similar between the material (M = 3.61, SD = 2.10) and experiential conditions (M = 3.78, SD = 1.98; t(485) = -0.90, p > 0.05), and between the control (M = 3.86, SD = 2.06) and suffering conditions (M = 3.52, SD = 2.00; t(485) = 1.81, p > 0.05).

Intrinsic motivation. An ANOVA examined the interaction between suffering (control vs. suffering) and product type (material vs. experiential) on intrinsic motivation. There was a main effect of suffering, with participants in the control condition reporting significantly higher intrinsic motivation than those in the suffering condition (F(1, 483) = 11.76, p < 0.001, η_p^2 = 0.02). No main effect of product type was found (F(1, 483) = 0.28, p > 0.05, η_p^2 = 0.00). Most important, a significant interaction between suffering and product type emerged (F(1, 483) = 9.21, p < 0.05, η_p^2 = 0.02). Pairwise comparisons (LSD) revealed that in

the material condition, suffering significantly decreased intrinsic motivation (M = 4.43) compared to control (M = 5.31; F(1, 483) = 20.80, p < 0.001, $\eta_p^2 = 0.04$). However, in the experiential condition, suffering did not significantly affect intrinsic motivation (M = 4.91) compared to control (M = 4.97; F(1, 483) = 0.07, p > 0.05, $\eta_p^2 = 0.00$). Including value and involvement as covariates did not change the results. See Fig. 7.

Well-being. An ANOVA examined the interaction between suffering (control vs. suffering) and product type (material vs. experiential) on well-being. There was a main effect of product type, with participants in the experiential condition reporting significantly higher well-being than those in the material condition (F(1, 483) = 5.56, p < 0.05, $\eta_p^2 = 0.01$). No main effect of suffering was found (F(1, 483) = 1.16, p > 0.05, $\eta p^2 = 0.00$). Most important, a significant interaction between suffering and product type emerged (F(1, 483) = 7.99, p < 0.05, $\eta_p^2 = 0.02$). Pairwise comparisons (LSD) revealed that in the material condition, suffering significantly decreased well-being (M = 5.36) compared to control (M = 5.75; F(1, 483) = 7.60, p < 0.05, $\eta_p^2 = 0.02$). However, in the experiential condition, suffering did not significantly affect well-being (M = 5.87) compared to control (M = 5.70; F(1, 483) = 1.52, p > 0.05, $\eta_p^2 = 0.00$). Including value and involvement as covariates did not change the results. See Fig. 8.

Repurchase intention. An ANOVA examined the interaction between suffering (control vs. suffering) and product type (material vs. experiential) on repurchase intention. There was a main effect of suffering, with participants in the control condition reporting significantly higher repurchase intention than those in the suffering condition (F(1, 483) = 16.51, p < 0.001, $\eta_p^2 = 0.03$). A main effect of product type was also found, with participants in the experiential condition reporting significantly higher repurchase intention than those in the material condition (F(1, 483) = 8.57, p < 0.05, $\eta_p^2 = 0.02$). Most importantly, a significant interaction between suffering and product type emerged (F(1, 483) = 6.34, p < 0.05, $\eta_p^2 = 0.01$). Pairwise comparisons (LSD) revealed that in the material condition, suffering significantly decreased repurchase intention (M = 4.28) compared to control (M = 5.22; F(1, 483) = 21.57, p < 0.001, $\eta_p^2 = 0.04$). However, in the experiential condition, suffering did not significantly affect repurchase intention (M = 5.06) compared to control (M = 5.28; F(1, 483) = 1.19, p > 0.05, $\eta_p^2 = 0.00$). Including value and involvement as covariates did not change the results. See Fig. 9.

Serial moderated mediation. We carried out a PROCESS Macro serial moderated mediation analysis (Hayes, 2022; model 83, 10,000 bootstraps) with the suffering condition (control = 0, suffering = 1) as the independent variable, product type (material = 0, experiential = 1) as moderator, intrinsic motivation as a first mediator, well-being as a second mediator, and repurchase intention as the dependent variable. The index of serial moderated mediation was significant (B = 0.20, SE = 0.07, 95 % CI: [0.06, 0.37]). The conditional indirect effects revealed that, in the material condition, suffering negatively influenced repurchase intention through a serial mediation, first by reducing intrinsic motivation, which then led to lower well-being (B = -0.22, SE = 0.06, 95 % CI: [-0.35, -0.11]). In contrast, in the experiential condition, the indirect effect of suffering on repurchase intention via intrinsic motivation and well-being was not significantly different from zero (B = -0.01, SE = 0.04, 95 % CI: [-0.10, 0.08]). Including value and involvement as covariates did not change the results. This supports H3.

7. General discussion

7.1. Discussion of findings

Across four studies, we found that suffering consistently undermines well-being and repurchase intention in material consumption but has minimal or no such effects in experiential contexts. In experiential consumption, consumers may interpret adversity as part of a meaningful journey. In contrast, suffering in material contexts appears misaligned with consumer expectations, reducing both psychological and behavioral outcomes. These findings reflect crucial differences in goal orientation and self-determination. Experiential consumption often activates promotion-focused (Higgins, 2000), intrinsically motivated goals related to growth and meaning (Carter & Gilovich, 2012; Kumar & Gilovich, 2015), making discomfort more tolerable. Material consumption, by contrast, tends to involve prevention-focused (Higgins, 2000), extrinsically motivated goals centered on control, acquisition, and efficiency (Ho & Wyer, 2021). Suffering disrupts these extrinsic goals and thwarts key psychological needs, particularly autonomy (sense of control) and competence (sense of effectiveness) (Deci & Ryan, 2000, 2008). As a result, material purchases, often evaluated against external standards, are more vulnerable to the effects of suffering. In contrast, experiential purchases, typically more self-relevant and

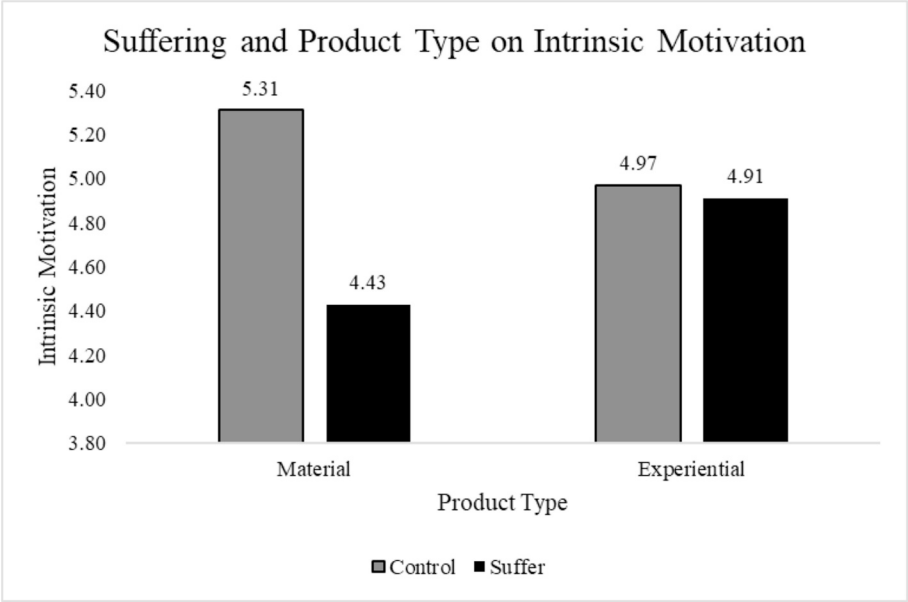

Fig. 7. Interaction between suffering (control vs. suffering) and product type (material vs. experiential) in determining intrinsic motivation (Study 3), based on estimated marginal means.

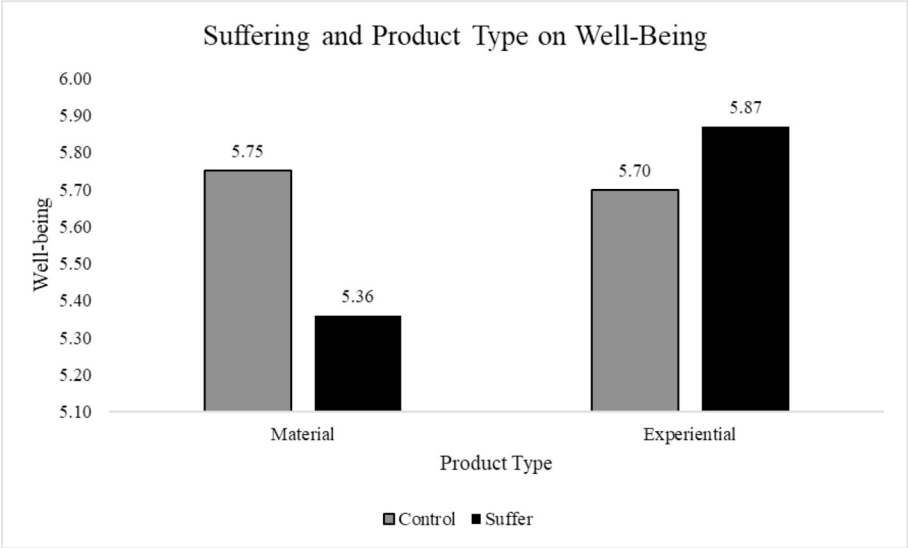

Fig. 8. Interaction between suffering (control vs. suffering) and product type (material vs. experiential) in determining well-being (Study 3), based on estimated marginal means.

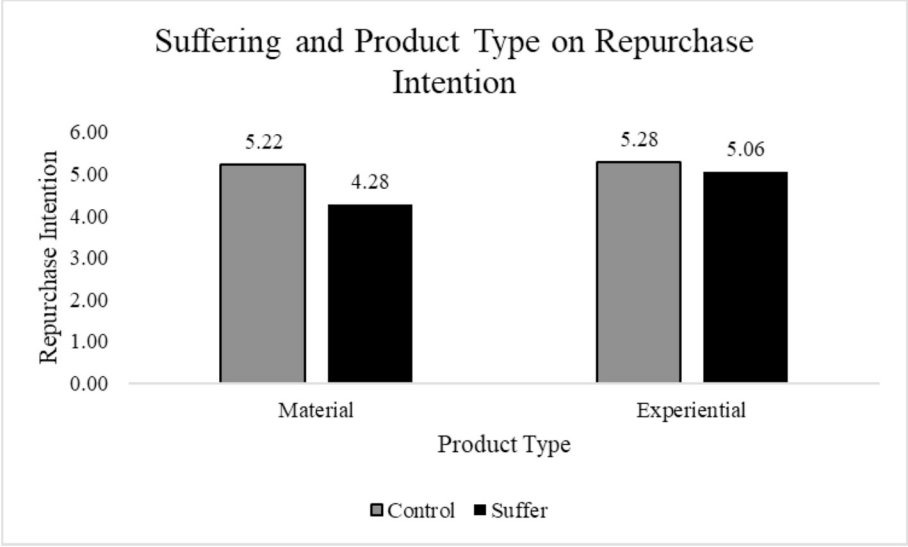

Fig. 9. Interaction between suffering (control vs. suffering) and product type (material vs. experiential) in determining repurchase intention (Study 3), based on estimated marginal means.

identity-affirming, appear more resilient (Carter & Gilovich, 2012). Although our findings highlight the role of autonomy and competence, relatedness may be less central in the types of individual consumption experiences we studied, where communal or shared aspects were less salient.

Ho and Wyer (2021) show that material consumption can enhance motivation following negative feedback when extrinsic goals are reinforced. While their work highlights motivational flexibility, our results reveal material consumption's vulnerability when suffering misaligns with acquisition goals. Thus, suffering is not inherently harmful but depends critically on how it fits the motivational and psychological structure of the consumption context.

While goal pursuit and self-determination theory explain effects of suffering, additional insight comes from how consumers cognitively and emotionally reconcile suffering with their sense of purpose. In experiential contexts, suffering is often framed as congruent with goals of growth or transformation (Ho & Wyer, 2021), reinforcing meaning (Murphy & Bastian, 2020). In contrast, suffering in material contexts tends to violate expectations of ease and efficiency, creating incongruity between effort and outcome (Inzlicht & Campbell, 2022). Consumers may attribute experiential suffering to personal growth or adventure (Keinan & Kivetz, 2011), while material suffering is more often attributed to external failures such as poor service or delays, lowering satisfaction (Gilovich & Gallo, 2020). Experiential suffering also may provide a "story worth telling" (Carter & Gilovich, 2012) and is linked to conversational status sharing (Bastos & Brucks, 2017), whereas material suffering might lack this narrative value and offers less post hoc justification. These attributional and narrative differences may explain why suffering feels more tolerable—or even meaningful—in experiential purchases as they may support meaningful goal pursuit (Higgins et al., 2020) or fulfill psychological needs (Bastos & Brucks, 2017), but aversive in material ones.

Further, consumers may struggle with cognitive dissonance to reconcile the expected pleasure of ownership with the discomfort experienced during acquisition. In contrast, experiential suffering can be rationalized as enhancing the value and meaning of the experience

(Olivola & Shafir, 2013). Finally, regulatory focus and fit (Higgins, 1997; 2000) offer additional nuance. Promotion-focused consumers, pursuing growth and mastery, may tolerate suffering if it aligns with meaningful goals. Prevention-focused consumers, avoiding loss or discomfort, are more likely to view suffering as a barrier, particularly in material contexts where efficiency is expected (Higgins et al., 2020). Thus, whether suffering undermines or sustains engagement depends on how well it fits consumers' goal orientation and supports or disrupts their underlying psychological needs.

7.2. Theoretical implications

This research contributes to understanding consumer suffering, intrinsic motivation, and eudaimonic well-being. Our research shows that suffering, as a distinct, negatively valenced form of effort, undermines intrinsic motivation and well-being in material but not experiential product acquisition, thereby expanding self-determination theory and goal pursuit frameworks to account for when and why effort backfires. While suffering is often viewed as uniformly negative, our findings show that it is particularly harmful in material contexts, where it significantly reduces well-being and repurchase intention. In contrast, experiential purchases remain resilient, with no significant decline in outcomes under suffering. We address a gap in the literature by conceptualizing suffering as a distinct, unpleasant form of effort, different from mere intensity or time investment. Whereas past research has emphasized the positive value of effort (e.g., effort justification, goal pursuit), we show when and how effort can backfire by undermining autonomy and competence. Our findings extend work on material versus experiential consumption (Carter & Gilovich, 2012; Kumar & Gilovich, 2016), motivation (Deci & Ryan, 2000), and eudaimonic well-being (Bauer et al., 2019) by demonstrating that the type of consumption critically shapes how discomfort is interpreted.

We expand self-determination theory by showing that material purchases, which focus on ownership and possession, often fail to fulfill key psychological needs (autonomy, competence, and relatedness) when suffering is involved (Deci & Ryan, 1980). In these contexts, suffering acts as a barrier, preventing consumers from achieving personal mastery or connection through their purchase and leading to reduced well-being. This, in turn, lowers the likelihood of repurchase. In contrast, suffering in experiential purchases is often viewed as part of a meaningful journey, allowing consumers to maintain well-being despite the discomfort. While past research suggests that painful experiences may not always be repeated since they are "collectable" (Keinan & Kivetz, 2011), our findings highlight that material suffering uniquely decreases repurchase intention, as it is seen as an unwanted hurdle, unlike in experiential contexts.

Additionally, while Kumar and Gilovich (2015) have shown that painful experiences can be repeated for social value or status, we demonstrate that suffering in material purchases leads to a clear drop in intrinsic motivation and repurchase intention. Consumers are less likely to value or re-engage with material goods under suffering conditions. However, experiential purchases remain more resilient, suggesting that consumers tolerate suffering more when it aligns with personal growth and meaningful experiences. Thus, a key contribution lies in expanding self-determination theory by showing that suffering in material consumption erodes well-being and repurchase intention because it fails to meet core intrinsic needs. This distinction advances our understanding of how suffering differently affects material and experiential consumption, shaping both well-being and future engagement.

7.3. Managerial impact

Our findings suggest that suffering in consumption is not inherently detrimental; it depends on how the experience aligns with consumers' psychological needs. This has direct implications for products and services that involve significant effort or discomfort, such as cosmetic procedures, fitness programs, healthcare treatments, or long waits for product launches. Marketers should consider reframing effortful experiences to emphasize transformation. For example, material goods that require waiting (e.g., product releases) may benefit from experiential framing that highlights anticipation, exclusivity, or shared experience (e.g., creating an experience for consumers as they wait in line). Similarly, painful or demanding services, like cosmetic treatments or endurance sports, can be positioned as journeys of personal growth rather than routine transactions, helping consumers reinterpret discomfort as meaningful. For experiential offerings, integrating elements of challenge or hardship can enhance appeal, particularly for consumers seeking self-expansion. Activities such as adventure travel, extreme sports, or immersive escape rooms can be marketed as peak experiences that build resilience and contribute to identity and fulfillment (Waterman, 2011). For example, companies offering mountain treks or horror-based attractions can frame discomfort as part of emotional thrill or self-discovery (RNZ, 2021; Chew, 2018).

In contrast, material consumption contexts are more vulnerable to suffering that feels unnecessary or misaligned. Frustrations like long waits, poor service, or clunky online checkouts can have a negative impact. Companies should minimize these friction points by optimizing user interfaces, streamlining checkout, and ensuring responsive service and fast delivery. Brands like Amazon exemplify this approach, making purchase and post-purchase processes intuitive and low effort. However, some brands (e.g., Apple, Supreme) thrive despite—or because of—elements of 'suffering,' such as long queues or limited access. This suggests that brand prestige or exclusivity may reframe suffering as part of a desirable experience. Future research could explore this paradox through managerial field studies to understand when suffering enhances rather than detracts from outcomes.

Finally, expectation management is essential. When discomfort is anticipated and framed as necessary to achieving a meaningful reward, consumers may accept or even embrace it. Messaging like "This experience may push your limits, but the reward is worth it" can help reduce post-experience frustration by aligning expectations with value.

7.4. Limitations and future research

This research has several limitations and multiple avenues for future investigation. While we focused on scenarios between material or experiential conditions, our studies provide very initial insight into the role of agency: the ability to act purposefully and effect change (Bandura, 2006). For example, Study 1 and Study 2a may reflect intentional suffering, where discomfort was willingly endured, while Studies 2b and 3 involve more unintentional suffering, where discomfort was unexpected. Future research might explore how agency may shape whether suffering is interpreted as meaningful or frustrating. Consumers who feel agentic in the consumption process may reframe suffering as purposeful, thereby preserving intrinsic motivation. Tikkanen et al. (2023) suggest that perceived agency can buffer negative experiences by helping consumers feel more in control of their well-being. Research could evaluate whether enhancing perceived agency (e.g., via framing) mitigates the negative impact of suffering on material outcomes.

Although we measured both intrinsic and extrinsic motivation subscales in Study 3, the exclusion of extrinsic motivation highlights an important insight. We found that extrinsic rewards, such as ownership or recognition, did not significantly mediate the effects of suffering on well-being or repurchase intention. This finding suggests that external rewards may not offset the negative impact of suffering, especially in material contexts where the emphasis is on acquisition rather than personal growth. However, this opens interesting avenues. Some studies suggest that challenging, experiential purchases can become conversational, even viral, as consumers share their experiences (Kumar & Gilovich, 2015). Future studies could examine how extrinsic rewards, such as social recognition or status, may interact with suffering in experiential contexts to influence consumer engagement.

While we applied self-determination theory (Deci & Ryan, 1980) to understand the role of intrinsic motivation, we did not directly measure domains of autonomy, competence, and relatedness. Future research should incorporate these measures to map distinct types of relationships. For instance, prior research suggests that perceptions of suffering vary across genders, with femininity associated with lower pain thresholds (e.g., Nascimento et al., 2020; Samulowitz et al., 2018). Similarly, religious beliefs may shape responses to suffering, as some traditions frame it as a meaningful part of personal growth (Wilt et al., 2017). The experience and interpretation of suffering may not only vary by consumption context, but also by individual domain differences in psychological needs, gendered norms, and belief systems.

Moreover, several boundary conditions warrant attention. First, anticipation of suffering may moderate its effects. Prior research shows that anticipated effort in experiential contexts can enhance enjoyment, while unanticipated discomfort in material contexts may heighten frustration (Kumar et al., 2014). Similarly, savoring an upcoming experience increases both real-time and remembered enjoyment (Chun et al., 2017). Our findings suggest that unanticipated suffering may be particularly detrimental for material consumption, while even anticipated effort (e.g., waiting for a limited product) might backfire by diminishing enjoyment during the process and leaving a negative memory trace.

Second, power and social identity may influence how suffering is interpreted. Consumers who have low identification with others in their consumption environment are less likely to question experiences morally, resulting in morally ambiguous responses (Von Schuckmann et al., 2018). This suggests that consumers with low power may be less likely to question situations in which they suffer. Conversely, as Rucker et al. (2012) argue, power enhances agency and control, while powerlessness amplifies frustration when effort fails to yield rewards. Suffering may therefore be more tolerable, or even valorized, among high-status individuals, particularly when the experience is socially visible (e.g., hiking a difficult trail or enduring an intense fitness class), raising the question of whether suffering can function as a status signal.

Cultural differences also warrant attention (Patterson & Schroeder, 2010). In individualistic cultures, where personal autonomy and individual goal achievement are emphasized, the negative effects of suffering in material purchases may be amplified. In contrast, in collectivistic cultures, where suffering is often seen as contributing to family or group well-being, its negative impact may be less pronounced across both material and experiential contexts. Similarly, individual-level factors such as trait autonomy, competence, and personal values may moderate responses to suffering. Consumers who pursue self-relevant goals may find value in effortful consumption (Higgins et al., 2020), while those driven by external or status-oriented goals may experience greater frustration.

Ethics. Ethics approval (ref: 23/139) was obtained from the university human research ethics committee of the first author. Participants consented to participate in the studies.

CRediT authorship contribution statement

Amy Errmann: Writing – original draft, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Luis Arango:** Writing – review & editing, Methodology, Formal analysis.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.jbusres.2025.115506.

Data availability

Data will be made available on request.

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Further reading

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