How Far Does Cognitive Depletion Impact Cinderella Shopping? Mediation Through Hedonic and Utilitarian Value Perceptions

Jasmine V. M. [1]
Nithin Jose [2]
Sruthiya V. N. [3]

Abstract

Purpose : The present study examined the online midnight time-bounded shopping habit, the Cinderella shopping behavior. This growing trend among online consumers, followed by sales promotional offers, induced us to discover the direct effects of cognitive depletion on hedonic value perception, utilitarian value perception, and attitude, leading to the Cinderella shopping habit. Moreover, we tried to measure the indirect effect of cognitive depletion on attitude mediated through hedonic and utilitarian value perceptions.

Design/Methodology/Approach : This empirical research undertook four independent latent variables, namely cognitive depletion, hedonic value perception, utilitarian value perception, and attitude, and one dependent variable—"Cinderella Shopping Habit." For the study, we applied purposive sampling, floated a structured questionnaire, received 400 responses, and ran the analysis on Jamovi software.

Findings : We found that cognitive deletion has a significant positive influence on hedonic value perception, utilitarian value perception, and attitude. Similarly, hedonic and utilitarian value perceptions showed a significant partial mediation effect in the relationship between cognitive depletion and attitude. Finally, the attitude framed on the above constructs impacted the Cinderella shopping habit.

Practical Implications : It is recommended that marketers and webpreneurs utilize the new movement in online shopping behavior wisely, considering the variables identified here. Though our study has its limitations, it allows scope for future researchers—variations in the effect of cognitive depletion on late-night shopping among consumers of different categories and products can be studied in the future.

Originality/Value : Unlike prior research, the current work builds a model to examine midnight time-bounded online consumer behavior by focusing on cognitive depletion.

Keywords : **attitude, Cinderella shopping, cognitive depletion, hedonic value perception, utilitarian value perception**

Paper Submission Date : August 25, 2023 ; Paper sent back for Revision : March 13, 2024 ; Paper Acceptance Date : April 20, 2024 ; Paper Published Online : June 15, 2024

E-commerce has experienced a tremendous upswing in recent years, fueled by advancements in technology, increased internet penetration, rise in mobile commerce, the proliferation of social media and online marketplaces, and changing consumer buying behavior (Li et al., 2020; Wagner et al., 2020). Online shopping has become an integral part of the modern consumer's shopping experience, with many preferring the

[1]*Assistant Professor,* P.G. & Research Department of Commerce, St. Joseph's College (Autonomous), Devagiri, Kozhikode - 673 008, Kerala. (Email : Jasminevm83@gmail.com) ; ORCID iD : https://orcid.org/0000-0002-9328-078X
[2]*Assistant Professor,* P.G. & Research Department of Commerce, St. Joseph's College (Autonomous), Devagiri, Kozhikode - 673 008, Kerala. (Email : nithinjoz@gmail.com) ; ORCID iD : https://orcid.org/0000-0001-5731-9934
[3]*Assistant Professor,* P.G. & Research Department of Commerce, St. Joseph's College (Autonomous), Devagiri, Kozhikode - 673 008, Kerala. (Email : amethystsru@gmail.com) ; ORCID iD : https://orcid.org/0000-0002-9903-1733

DOI : https://doi.org/10.17010/ijom/2024/v54/i6/173944

convenience, variety, and lower prices offered by e-commerce platforms (Sharma et al., 2020). The availability of online reviews, ratings, descriptions, and images makes it easier for consumers to develop informed purchase decisions at their convenience (Shihab & Putri, 2019). However, how consumers perceive and evaluate website information depends on their cognition, which, in turn, affects their buying behavior (Wu & Liao, 2021).

Cognition is the mental processes that involve thinking, reasoning, and perception, which influence a person's behavior and decision-making (Johnson, 2008; Lawrie et al., 2023; Newell & Shanks, 2014; Rabipour et al., 2022). While shopping, consumers develop different perceptional values framed by the quality, attributes, features, and benefits of the product, as well as the price, brand reputation, and customer service (Li et al., 2023; Wang & Yu, 2016; Zeithaml, 1988). Consumers may focus on certain product features and ignore others based on cognitive biases and preferences (Coyne & Gotlib, 1983). Our cognitive abilities can vary throughout the day, with some periods more conducive to mental activities than others. During the day, our natural circadian rhythms dictate that we are more active and alert, leading to higher levels of cognitive activeness (Rafael & Lopes, 2023; Schmidt et al., 2007). As a result, we are more likely to make better decisions, process information more efficiently, and engage in complex cognitive tasks than at night. Factors such as work-related stress, social pressures, and lifestyle habits may also contribute to cognitive depletion late at night (Calvo & Gutiérrez-García, 2016; Johnson, 2008; Kawachi & Berkman, 2001). This can lead to reduced cognitive abilities, making it more challenging to process information, concentrate, and make decisions (Alhola & Polo-Kantola, 2007; Halkiopoulos et al., 2022). As per Baumeister et al. (1998), cognitive depletion leads to unconscious and quicker decisions than thoughtful decisions. Cognitive depletion can make comparing the cost and benefits of different options more complex, leading people to prioritize immediate gratification over long-term benefits (Chetioui & El Bouzidi, 2023; Engin & Vetschera, 2017).

At the mentally fatigued stage, our ability to make decisions and resist temptations is reduced, which may lead to suboptimal choices in shopping (Halkiopoulos et al., 2022). Understanding these variations in consumer's cognitive capacities, online traders often try to attract such target customers by advertising during late-night TV shows or at the end of a long work day, arranging midnight online shopping festivals to launch new products or stock clearance with quota restrictions (Tuttle, 2019; Xu et al., 2017; Yan et al., 2016; Zheng et al., 2013). Besides, online marketers design their e-commerce platforms and boost digital footage to the e-commerce websites by offering special discounts and incentive strategies, especially at bedtime for limited hours (Tabor, n.d.; Tuttle, 2019; Wittmann & Paulus, 2008). These time-bound discounts and late-night offers are developing a new shopping habit called '*Cinderella shopping*' among online night nocturnals. Cinderella shopping is an emerging trend in which consumers shop after midnight, especially between 12 a.m. and 2 a.m. (Izogo & Jayawardhena, 2018; Mishra & Kar, 2023; Tuttle, 2019; Tabor, n.d.). The time pressure-based offers and cognitive depletion together distract customers from carefully considering all the available information; instead, they rely on familiar brands, colors, or any other cues and show an increased tendency to make persuasive messages as well as impulsive purchases leading to anticipatory regrets (Lu et al., 2016; Zemack-Rugar et al., 2016). At the same time, utilitarian perceptions may attract and influence purchase intention, leading to justifiable buying decisions (Chiou & Ting, 2011; Childers et al., 2001).

It was reported that, in 2021, around 74% of women and 70% of men were engaged in online purchases during their bedtime (Caesar, 2023). Against this backdrop, the current research attempts to develop a unique model that explains the effects of cognitive depletion on the hedonic and utilitarian perceptions of online consumer shopping at midnight. Considering the importance of this emerging trend, a systematic examination of the underlying mechanism of the aspects mentioned above—cognitive depletion (CD), hedonic value perception (HVP), utilitarian value perception (UVP), attitude (AT), and Cinderella shopping habit (CSH)—will enable retailers, e-commerce entrepreneurs, and sales promotion managers to grab and hold online consumers' attention successfully.

Some extant studies have consistently demonstrated that perceived hedonic and utilitarian values significantly impact consumers' attitudes toward shopping. Many empirical studies have investigated consumers' psychological benefits from online shopping (Bei & Chen, 2015; Chen et al., 2020; Yin & Qiu, 2021). However, these studies primarily concentrate on variables, such as hedonic and utilitarian value perceptions and their effects on buying behavior in the context of daytime shopping (Jee, 2021; Kusumawardani et al., 2023). A dearth of research has examined attitudes toward offline and physical midnight shopping habits (Geiger, 2007). While there are studies explaining the effect of cognitive depletion on decision-making, the influence of cognitive depletion on consumer perceptual values created during midnight online shopping is noted as a research gap, and this study is an initiative to overcome the existing limitations of research. This research aims to carefully investigate the research problem of the potential effect of cognitive depletion on the hedonic and utilitarian perceptions of midnight online consumers, as well as explore how these perceptions may impact the attitude and shopping habits of "Cinderella shoppers," building upon the aspects mentioned above.

Literature Review and Theoretical Background

Cognitive Depletion

According to the review, economics and psychology have different perspectives regarding the "cost of thinking" in decision-making processes, particularly consumer behavior. Traditional economic theory often overlooks the cognitive effort as a cost-free process, where benefits balance out costs. Conversely, Fechner et al. (2018) argued that decision-making incurred a cognitive cost. Various psychological theories support the notion that mental capacity is a limited resource, leading to a trade-off between effort and accuracy in decision-making (Johnson & Payne, 1985). Though the Adaptive Toolbox program acknowledges humans' ability to adapt to constraints, it admits the practical significance of the limited cognitive resources in consumer decision-making (Jacoby, 1984). Johnson (2008) explained in his study that the decision-making process involves significant mental effort, with harder decisions depleting more mental capacity and leading to reliance on automatic, quick-cognitive decisions.

Moreover, recent research also admits that concurrent cognitive load negatively impacts consumer decision-making, amplifying the effects of readily available information on various purchase decisions, including brand choice, product similarity ratings, and consumption levels (Yin & Qiu, 2021). This suggests that when consumers face cognitive demands, their ability to make informed and optimal decisions is compromised (Dangi et al., 2020). Considering the above facts, an understanding of how cognitive capacity, a limited resource, becomes crucial for designing optimal choice environments and the extent to which cognitive depletion impacts the purchase decisions of online midnight consumers are addressed with the following hypotheses (Payne et al., 1999) :

- **H01** : Cognitive depletion (CD) has no significant influence on the consumers' purchase decisions based on hedonic value perception (HVP) toward Cinderella shopping.

- **Ha1** : Cognitive depletion (CD) has a significant influence on consumers' purchase decisions based on hedonic value perception (HVP) toward Cinderella shopping.

- **H02 :** Cognitive depletion (CD) has no significant influence on consumers' purchase decisions based on utilitarian value perception (UVP) toward Cinderella shopping.

- **Ha2 :** Cognitive depletion (CD) has a significant influence on consumers' purchase decisions based on utilitarian value perception (UVP) toward Cinderella shopping.

- **H03 :** Cognitive depletion (CD) has no significant influence on consumers' purchase decisions based on attitude (AT) toward Cinderella shopping.

↳ **Ha3 :** Cognitive depletion (CD) has a significant influence on consumers' purchase decisions based on attitude (AT) toward Cinderella shopping.

Hedonic Value Perception

The price promotion offering develops hedonic value perception through intrinsic rewards, creating excitement/pleasure/curiosity and surprise (Chiu et al., 2014; Jain et al., 2018). Sales promotion techniques that generate a feeling of necessity or practical usage/convenience of use or monetary benefits embody hedonic perception among customers (Abdelkhair et al., 2023; Kivetz & Zheng, 2017; Sinha & Verma, 2020). At the same time, Hirschman and Holbrook (1982) viewed "hedonic consumption" as a subjective and personal concept characterized by enjoyment, fun, multisensory stimulation, and fantasy, which may differ from person to person (Sen, 2023). Thus, much of the existing literature discussed the concept of hedonic value perception from different viewpoints like how smart feelings are created from hedonic perception, how hedonic perceptions are framed with website image, navigation structure, social comparisons, novelty, excitement, and emotional arousal leading to online shopping, etc. (Atkins & Hyun, 2016; Chiu et al., 2014; Ozkara et al., 2017; Pahari et al., 2023). However, none of the studies took the initiative to understand the research problem of whether hedonic value perception (HVP) framed during the visit of midnight online sales promotion sites influences consumers' attitudes toward it. This unaddressed research question is here attempted by framing the following hypotheses :

↳ **H04 :** The hedonic value perception (HVP) toward midnight online sales promotion does not influence the consumers' attitude (AT) toward it.

↳ **Ha4 :** The hedonic value perception (HVP) toward midnight online sales promotion influences consumers' attitude (AT) towards it.

Utilitarian Value Perception

In contrast to hedonic perception, utilitarian perception explains overall practical and instrumental values assessed by the customer based on benefits from using products and services and sacrifices (Djelassi et al., 2018). Utilitarian perception is justifiable, and such value also substantially impacts customers' online shopping channel choices (Chiou & Ting, 2011). As per the technology acceptance model (TAM), perceived usefulness significantly impacts one's decision to use any system for shopping (Davis et al., 1989; Tomar et al., 2018). Therefore, utilitarian value perception integrates more cognitive aspects of perception to the external stimuli, such as efficiency, convenience of use, and value-for-money features etc. (Chen et al., 2020; Djelassi et al., 2018; Tomar et al., 2023). With the understanding of the existing literature, we attempted to explore the research question—the extent to which utilitarian value perception (UVP) affects consumers' attitudes toward midnight online sales promotion.

↳ **H05 :** The utilitarian value perception (UVP) toward midnight online sales promotion does not influence the consumers' attitude (AT) toward it.

↳ **Ha5 :** The utilitarian value perception (UVP) toward midnight online sales promotion does influence the consumers' attitude (AT) toward it.

Attitude

Attitude is an underlying predisposition or inclination toward responding positively or negatively toward shopping behavior. As per the expectancy-value model, value plays a crucial role as an antecedent of attitude

(Chung, 2015; Chen et al., 2020). La Barbera and Ajzen (2022) identified two attitude versions: instrumental and experiential. While the instrumental attitude is framed with positive or negative behavioral impacts, the experiential attitude is focused on affective states experienced while behaving. From the literature, it is observed that consumers who derive higher value from shopping, i.e., utilitarian shopping value (USV) or experience positive emotions, i.e., hedonic shopping value (HSV), are likely to have a stronger attitude toward shopping (Lee & Wu, 2017). Besides, it has been found that both hedonic and utilitarian dimensions positively affect consumers' attitudes toward shopping, which, in turn, determines the online purchase decision (Pang, 2021; Zirena-Bejarano & Zirena, 2023). At the same time, these aspects are discussed considering daytime consumer behavior. Here, we put efforts into understanding the research problem of the role of attitude in shaping Cinderella shopping habits (CSH), which has not been considered so far, and the following hypotheses have been proposed:

↳ **H06 :** Attitude (AT) toward midnight online sales promotion does not influence the Cinderella shopping habit (CSH).

↳ **Ha6 :** Attitude (AT) toward midnight online sales promotion influences the Cinderella shopping habit (CSH).

Midnight or Cinderella Shopping

With the rise of e-commerce, retailers have started organizing midnight time-quota-restricted shopping festivals, accompanied by significant discounts, to attract online shoppers. This trend has given birth to a time-bound online shopping habit called the Cinderella shopping habit (CSH). Here, this entire mental process among midnight online customers leading to such a shopping habit is titled "Cinderella shopping behavior." The theory of resource allocation suggests that time pressure leads individuals to make quick decisions, depleting their cognitive resources compared to daytime (Zheng et al., 2013). This cognitive depletion and bias may result in customers relying on mental shortcuts when evaluating sales promotion strategies employed by online traders (Coyne & Gotlib, 1983).

Furthermore, the perceived utilitarian value and hedonic value of the shopping experience can influence one's attitude toward it (Atkins & Hyun, 2016; Lee & Wu, 2017; Saptono et al., 2019). The interplay of these variables provides an opportunity to identify the research problem and to formulate the research question accordingly, i.e., "Is there a mediation effect of hedonic and utilitarian perceptions in the relationship between cognitive depletion and the attitude toward time-bounded online midnight sales promotions?" The hypotheses developed in this regard are given below :

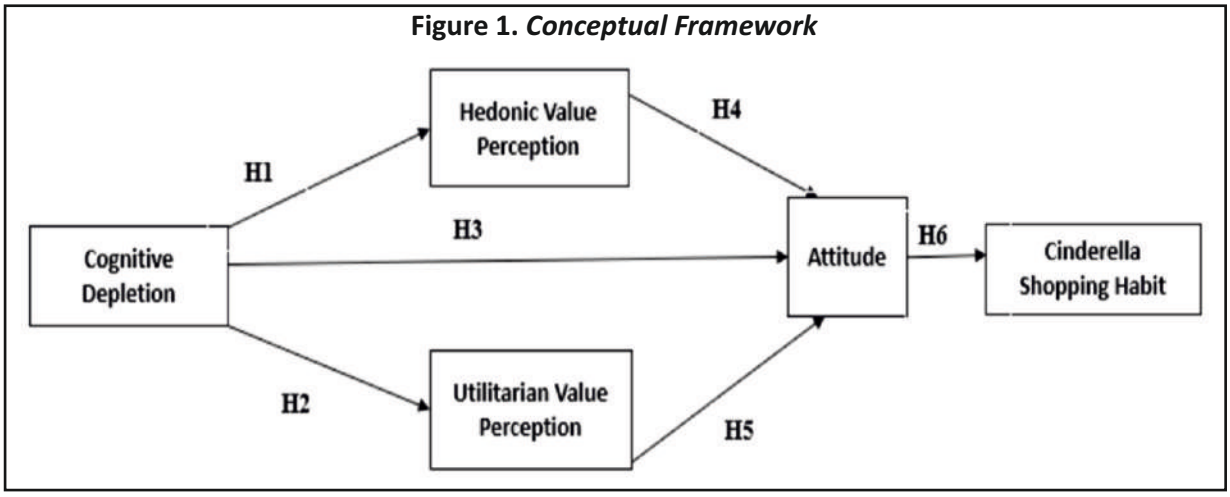
↳ **$H07_{new}$:** Hedonic and utilitarian value perceptions have no mediating effect on the relationship between cognitive depletion (CD) and attitude (AT) toward midnight online sales promotion.

↳ **$Ha7_{new}$:** Hedonic and utilitarian value perceptions have a mediating effect on the relationship between cognitive depletion (CD) and attitude (AT) toward midnight online sales promotion.

Conceptual Model

This research paper depicts a conceptual framework based on independent variables, namely cognitive depletion, which may or may not affect utilitarian value perception, hedonic value perception, and attitude. Again, this model tries to explain whether cognitive depletion (CD) mediated through hedonic and utilitarian perception may or may not affect consumer attitude toward midnight online sales promotion. Furthermore, attitude (AT) is also hypothesized to affect the Cinderella shopping habit (CSH), and all these hypotheses can be referred to in Figure 1.

Figure 1. ***Conceptual Framework***



Objectives of the Study

- To assess the impact of cognitive depletion on online midnight consumers regarding hedonic value perception, utilitarian value perception, and attitude.
- Evaluate the influence of hedonic and utilitarian value perceptions toward midnight online sales promotion on consumers' attitude (AT) toward it.
- Evaluate the influence of attitude toward midnight online sales promotion on Cinderella shopping habit.
- Analyze the mediating effect of both hedonic value perception and utilitarian value perception in the relationship between cognitive depletion and attitude.

Research Methods

This study opted for an empirical research method, and primary data collected using a structured questionnaire were analyzed to examine the significance of relationships in the proposed conceptual framework. The online customers residing in Kerala, India, who had engaged in Cinderella shopping (time-bounded midnight online shopping) at least once formed the sampling frame. Since this study centered on Cinderella shoppers, the purposive sampling method, a non-probability sampling technique, was applied for data collection. The survey gathered data from a sample size of 400 individual respondents, serving as the sample unit. The measures were taken from participants' responses on a 5-point Likert scale, with *"strongly agree"* corresponding to "5" and *"strongly disagree"* corresponding to "1." The variables for the current study were developed based on prior research focusing on hedonic value perception, utilitarian value perception, attitude, and cognitive depletion (Das et al., 2018; Jee, 2021; Pang, 2021). As the study demands testing of a model and predicting the impact of the independent latent variables on the dependent variable, structural equation modeling was used with Jamovi software version 2.3.28. Before moving on to the SEM analysis, we checked the reliability of the data and noticed Cronbach's alpha value as 0.888. The study was done from January to June 2023. The questionnaire used for data collection was added to the Appendix. Thus, the hypothesis statements, namely "cognitive depletion (CD) significantly influences consumers' purchase decisions determined by hedonic value perception (HVP), utilitarian value perception (UVP), and attitude (AT) toward Cinderella shopping" as well as "the hedonic and utilitarian value perceptions (HVP) have a mediating effect on the relationship between cognitive depletion (CD) and attitude (AT) toward midnight online sales promotion" were fulfilled with the following procedures.

Analysis and Results

Demographic Data Analysis

Out of 400 respondents, 210 (52.5%) were male, 190 (47.5%) were female, and the majority of the respondents were aged "up to 30" years old, comprising 135 (33.8%). Again, 203 respondents were 6-day workers, while 197 respondents worked five days a week.

Data Analysis Techniques and Procedures

To examine the relationship in the proposed conceptual model of this study, we used structural equation modeling (SEM) operated under Jamovi 2.3.28 software. The confirmatory factor analysis (CFA) was useful for investigating the causal explanations among the study variables: cognitive depletion, hedonic perception, utilitarian perception, attitude, and Cinderella shopping behavior. SEM allowed us to measure the influence of cognitive depletion on the attitude toward Cinderella shopping and the mediated effect of hedonic and utilitarian perception formed while doing midnight time-restricted online shopping. Thus, it can fix the correlation between exogenous (or independent) and endogenous (or dependent) latent research constructs using path analysis (Hair et al., 2017; Ringle et al., 2023).

Researchers used exploratory factor analysis (EFA) with principal component analysis and varimax rotation to identify the variables. Kaiser-Meyer-Olkin's measure of sampling adequacy showed a value of 0.892, and Bartlett's test of sphericity reflected a chi-square value of 7181.835. These values were reported, in fact, as significant ($p < 0.001$). After ensuring the sample adequacy for each variable included in the model, EFA was done, and five factors with an Eigenvalue greater than "1" were found. The test results indicated that all the constructs collectively had a variance explanatory capacity of 80.67%. The Cronbach's alpha value was tested for the reliability of the data collected. The correlation, descriptive statistics, EFA, and reliability tests were done in SPSS version 25. The factor loadings of observed variables derived from confirmatory factor analysis (CFA) enabled the determination of convergent and discriminant validity of latent constructs. Finally, using SEM, we analyzed the direct and extended relationships between the exogenous variables and endogenous variables specified in the conceptual model (Figure 1).

Manipulation Checks

The current study used the common method variance (CMV), based on Harman's (1976) single-factor test, to check the presence of common method bias. The test results reflected a non-problematic CMV as the first factor, accounting for less than 50% of the variance among the variables (Fuller et al., 2016; Podsakoff & Organ, 1986). A significant common method variance is present when a single component or a general factor is responsible for the majority of the overall variation indicated by the items (Podsakoff et al., 2003). Moreover, the highest correlation was 0.693 (between CD and CSH), with none of the research construct correlations exceeding the 0.90 cut-offs (Bagozzi et al., 1991). The results of the tests revealed no bivariate correlation between the variables, suggesting a non-problematic common method bias.

Furthermore, the variance inflation factor (VIF) used to measure the collinearity of indicators showed a value less than the critical value of five (Hair et al., 2017). This demonstrates that the indicators' collinearity with measurements and structural models is not a barrier to the investigation. Before testing the structural model's hypothesis, the construct and discriminant validity of the measuring model were evaluated.

Assessment of the Measurement Model

After checking normality, CFA has been done to develop the measurement model of Cinderella shopping behavior. Despite the dataset's extensive size and the conceptual model's complexity, χ^2 and p value-based interpretation for CFA may not be good enough. So, other values are also considered when measuring the model's fitness. In the first run, the residual covariance modification indices table shows the residual covariance of CD3 and CD4 variables with a value of 118.5. In the second run, the residual covariance modification indices table shows the residual covariance of CSH1 and CSH2 variables with a value of 54.34. In the third run, the residual covariance modification indices table shows the residual covariance of HVP1 and HVP4 variables with a value of 40.13. By allowing the covariance for all these variables, modification indices values improved. The current study has employed a bootstrapping technique using *t*-statistics to examine the path relationships within the structural model (Hair et al., 2017; Ringle et al., 2023). To estimate the model of each subsample, 5,000 cases of sub-samples were chosen using bootstrapping processes.

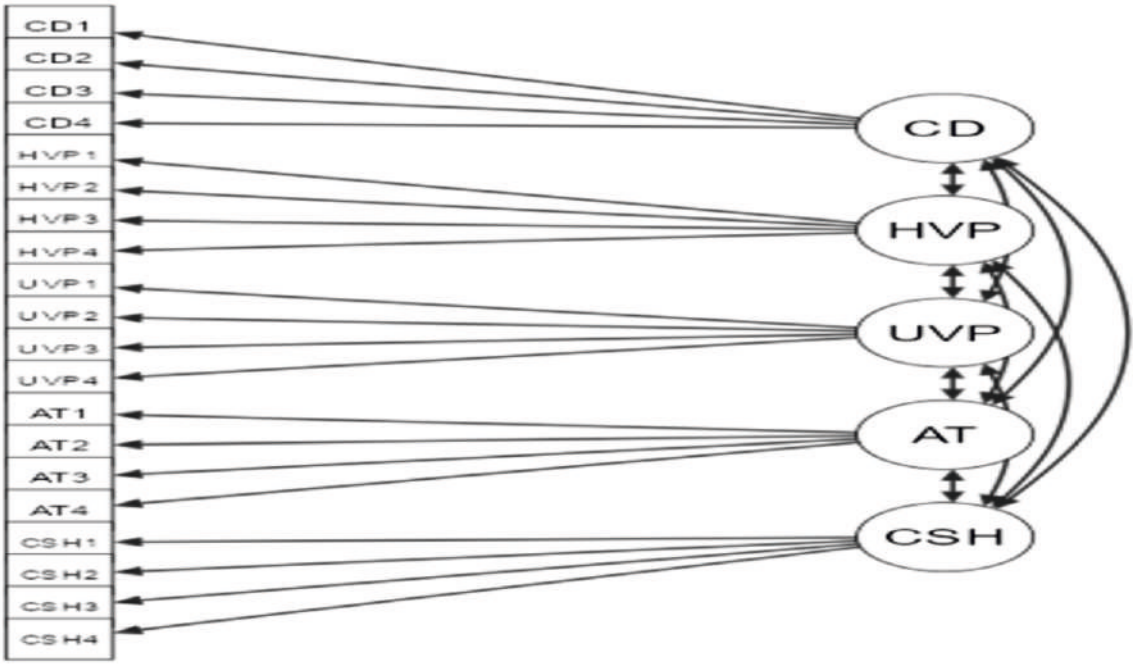
Its results show adequate model fit indices values: CFI (0.931), TLI (0.917), and RMSEA (0.08), indicating the fitness of the model proposed. All the factors are significantly loaded with values above 0.5. The image of CFA is given in Figure 2, and the factor covariance is depicted in Table 3.

Table 1. ***Measurement Model Loadings (EFA, CFA), Cronbach's Alpha (CA), Composite Reliability (CR), and Average Variance Explained (AVE)***

Constructs	Items	Mean	*SD*	EFA	CFA	AVE	CR	CA
Cognitive Depletion	*CD1*	3.90	1.070	0.741	0.889***	**0.751**	**0.923**	**0.885**
	CD2	4.10	1.033	0.780	0.918***			
	CD3	3.99	1.136	0.774	0.815***			
	CD4	3.97	1.148	0.888	0.843***			
Hedonic Value Perception	*HVP1*	2.76	1.394	0.812	0.751***	**0.779**	**0.933**	**0.891**
	HVP2	3.39	1.519	0.947	0.924***			
	HVP3	2.78	1.419	0.876	0.871***			
	HVP4	3.11	1.454	0.950	0.971***			
Utilitarian Value Perception	*UVP1*	3.19	1.193	0.696	0.749***	**0.615**	**0.863**	**0.854**
	UVP2	3.78	1.291	0.787	0.867***			
	UVP3	3.85	1.218	0.810	0.657***			
	UVP4	3.71	1.295	0.695	0.848***			
Attitude	*AT1*	3.17	1.205	0.842	0.879***	**0.664**	**0.887**	**0.801**
	AT2	3.18	1.214	0.820	0.855***			
	AT3	3.17	1.240	0.782	0.819***			
	AT4	2.67	1.281	0.755	0.695***			
Cinderella Shopping Habit	*CSH1*	4.20	0.871	0.853	0.851***	**0.758**	**0.926**	**0.886**
	CSH2	4.20	0.877	0.859	0.864***			
	CSH3	3.47	1.016	0.795	0.873***			
	CSH4	3.48	0.968	0.801	0.896***			

Note. *** Significant at the 1% level of significance.

Figure 2. ***CFA — Cinderella Shopping Behaviour***



Reliability and Validity

The values of factor loadings, composite reliabilities (CR), and average variance extracted (AVE) are depicted in Table 1, and it can be noticed that the standardized factor loadings of the measurement model exceeded the recommended values of 0.70 (Fornell & Larcker, 1981). The Cronbach's alpha test results (0.888) also show acceptable criteria, indicating that the data fulfilled reliability conditions (Hair et al., 2017). Supporting the above, we noticed the CR estimates of the research constructs align with the recommendations and reported that all values surpassed 0.70, ensuring internal consistency and reliability (Sarkar et al., 2001). The AVE values for all constructs in the conceptual model developed exceeded the recommended cut-off, i.e., 0.50 (Fornell & Larcker, 1981). The test results indicated that all the constructs collectively have a variance explanatory capacity of 80.67%. In addition, each construct was explained by greater than 50% of the variance of its respective indicators, signifying the attainment of convergent validity (Ringle et al., 2023; Tsai & Tiwasing, 2021). Thus, the reliability

Table 2. ***Fornell-Larcker Criterion Results***

		CD	*HVP*	*UVP*	*AT*	*CSH*
Fornell-Larcker Criterion	*CD*	**0.867**				
	HVP	0.261**	**0.883**			
	UVP	0.557**	0.193**	**0.784**		
	ATT	0.442**	0.267**	0.582**	**0.815**	
	CSH	0.693**	0.228**	0.504**	0.458**	**0.871**

Note. Bold diagonals represent the square root of the AVE, while the off-diagonal represents the correlations.

** Correlation is significant at the 0.01 level (2-tailed).

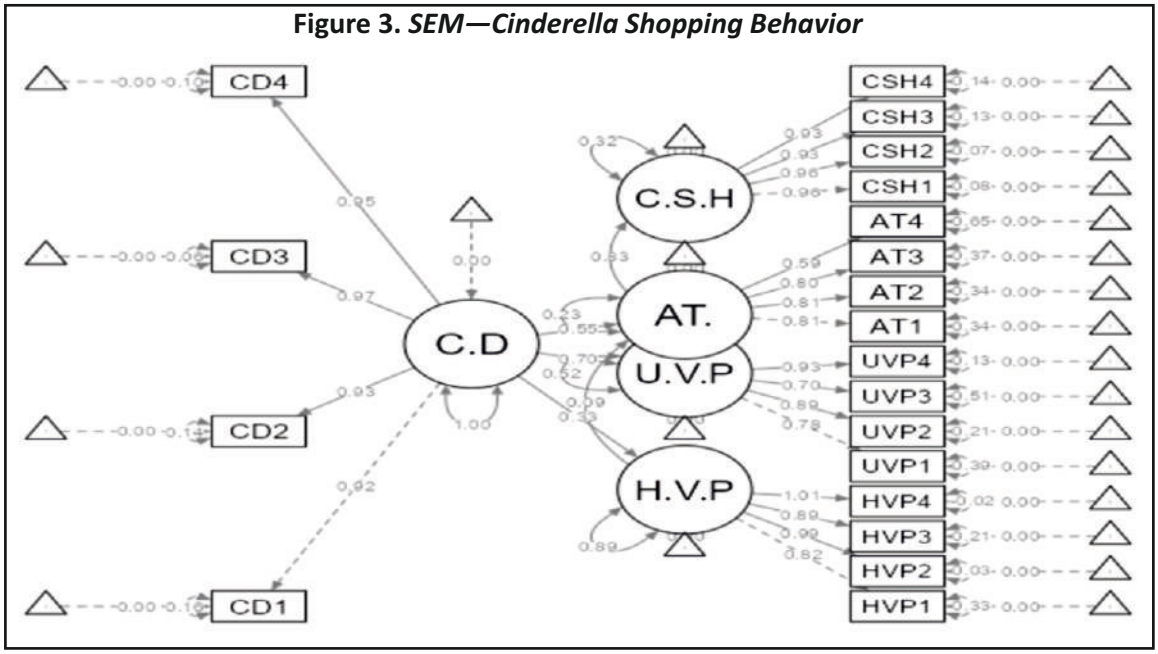
Table 3. ***Factor Covariances***

		Estimate	S.E.	*Z*	*p*	Stand. Estimate
CD	*CD*	1.000[a]				
	HVP	0.210	0.0512	4.11	< 0.001	0.210
	UVP	0.668	0.0338	19.78	< 0.001	0.668
	AT	0.512	0.0423	12.10	< 0.001	0.512
	CSH	0.740	0.0276	26.78	< 0.001	0.740
HVP	*HVP*	1.000[a]				
	UVP	0.152	0.0534	2.85	0.004	0.152
	AT	0.243	0.0508	4.78	< 0.001	0.243
	CSH	0.191	0.0515	3.71	< 0.001	0.191
UVP	*UVP*	1.000[a]				
	AT	0.651	0.0354	18.38	< 0.001	0.651
	CSH	0.580	0.0394	14.74	< 0.001	0.580
AT	*AT*	1.000[a]				
	CSH	0.533	0.0413	12.90	< 0.001	0.533
CSH	*CSH*	1.000[a]				

Note.[a.] fixed parameter.

and validity of the data are measured, and various psychometric properties of the scale are found to be good enough to proceed with further analysis (Fornell & Larcker, 1981). The discriminant validity of the measurement model is checked based on Fornell and Larcker's (1981) criterion, which is given in Table 2. As per the results, the AVE values of the constructs are above 0.5, and CR values are also above 0.7. Again, the square root of the AVE exceeded the correlation values between the same variable and other research constructs, as shown in Table 2.

Figure 3. ***SEM—Cinderella Shopping Behavior***



Assessment of Structural Equation Model and Mediation Effect

The SEM has been applied to test the various hypotheses framed in connection with the proposed model, noticing adequate fit indices values, i.e., comparative fit index (CFI) 0.997, Tucker-Lewis Index (TLI) 0.997, Bentler-Bonett non-normed fit index (NNFI) 0.997, and Bentler-Bonett normed fit index (NFI) 0.997. The SEM image is given in Figure 3, which gives the scope for checking the mediation effects.

Simple Mediation Effect

The model allows for examining the mediation effect of hedonic and utilitarian value perceptions in the relationship between cognitive depletion and attitude. The mediation effects of hedonic and utilitarian value perceptions were tested based on $H7_{new}$, and their results are given in Tables 5 and 6, respectively. The images of

Table 4. ***Structural Model Results***

Alternative Hypotheses	Dep	Pred	S. E.	β	*t*	*p*	VIF	Decision
Ha1	*HVP*	*CD*	0.350	0.328	08.17	<0.001	1.00	Accepted
Ha2	*UVP*	*CD*	0.028	0.695	21.05	<0.001	1.00	Accepted
Ha3	*ATT*	*CD*	0.039	0.553	12.34	<0.001	1.00	Accepted
Ha4	*ATT*	*HVP*	0.036	0.086	02.38	0.017	1.00	Accepted
Ha5	*ATT*	*UVP*	0.045	0.359	08.22	<0.001	1.00	Accepted
Ha6	*CSH*	*ATT*	0.028	0.826	33.98	<0.001	1.00	Accepted

Table 5. ***Indirect and Total Effects of HVP Mediation***

Type	Effect	S. E.	β	*z*	*p*
Indirect	*CD* ⇒ *HVP* ⇒ *AT*	0.0152	0.042	02.96	0.003
Component	*CD* ⇒ *HVP*	0.0636	0.260	05.40	< 0.001
	HVP ⇒ *AT*	0.0368	0.162	03.55	< 0.001
Direct	*CD* ⇒ *AT*	0.0486	0.400	08.74	< 0.001
Total	*CD* ⇒ *AT*	0.0477	0.442	09.85	< 0.001

Note. Confidence intervals are computed using the standard method (Delta method).

Note. Betas are completely standardized effect sizes.

Table 6. ***Indirect and Total Effects of UVP Mediation***

Type	Effect	S. E.	β	*z*	*p*
Indirect	*CD* ⇒ *UVP* ⇒ *AT*	0.0357	0.271	08.07	< 0.001
Component	*CD* ⇒ *UVP*	0.0436	0.557	13.42	< 0.001
	UVP ⇒ *AT*	0.0488	0.487	10.10	< 0.001
Direct	*CD* ⇒ *AT*	0.0512	0.171	03.55	< 0.001
Total	*CD* ⇒ *AT*	0.0477	0.442	09.85	< 0.001

Note. Confidence intervals are computed using the standard method (Delta method).

Note. Betas are completely standardized effect sizes.

Figure 4. ***Mediation Effect of HVP***

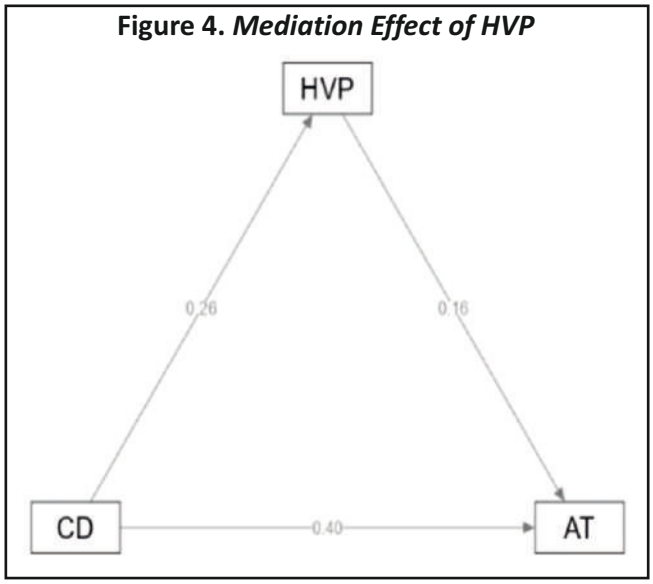
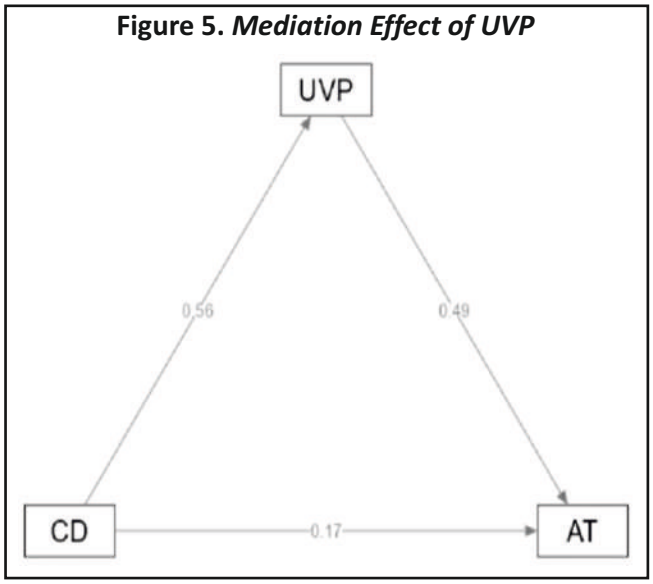


Figure 5. ***Mediation Effect of UVP***



SEM are given in Figure 4 and Figure 5. The null hypothesis (H07) is rejected based on the direct and indirect effects.

Test of Hypotheses

As per Table 4, cognitive depletion shows a significant positive influence in developing hedonic ($\beta = 0.328$, $t = 8.17$, $p \leq 0.001$) and utilitarian ($\beta = 0.695$, $t = 21.05$, $p \leq 0.001$) value perceptions. Again, attitude is significantly and positively impacted by cognitive depletion ($\beta = 0.553$, $t = 12.34$, $p \leq 0.001$), hedonic ($\beta = 0.086$, $t = 2.38$, $p < 0.05$), and utilitarian ($\beta = 0.359$, $t = 8.22$, $p \leq 0.001$) value perceptions framed during midnight online shopping. Furthermore, attitude significantly and positively influences the Cinderella shopping habit ($\beta = 0.826$, $t = 33.98$, $p \leq 0.001$). Thus, Ha1, Ha2, Ha3, Ha4, Ha5, and Ha6 are accepted at a 5% significance level.

H7, intended to analyze the mediating effect of hedonic value perception and utilitarian value perception in the relation between cognitive depletion and attitude toward time-restricted midnight online shopping/Cinderella shopping given in Table 5 and Table 6, reveals that hedonic value perception ($\beta = 0.042$, $t = 2.96$, $p \leq 0.05$) as well as utilitarian value perception ($\beta = 0.271$, $t = 8.07$, $p \leq 0.001$) have a significant mediating effect in the relation between cognitive depletion and attitude. So, Ha7 is accepted. The results show the complete pathway from CD (independent variable) to HVP (mediator) to AT (dependent variable) is significant ($z = 8.74$, $p \leq 0.001$). Likewise, the complete pathway from CD (independent variable) to UVP (mediator) to AT (dependent variable) is also significant ($z = 3.55$, $p \leq 0.001$). This depicts that hedonic value perception, as well as utilitarian value perception, partially mediates the effects of cognitive depletion on attitude toward Cinderella shopping.

Discussion

Online marketers adopt innovative sales promotion strategies daily to attract and maintain online customers. This research is drawn to verify the impact of cognitive depletion and hedonic and utilitarian value perceptions regarding midnight-time bounded sales promotion on the consumers' purchase decisions regarding attitude and shopping habits. The effects of hedonic and utilitarian perceptions on the attitude are positive and significant, which support the existing literature (Bandyopadhyay et al., 2021; Jee, 2021; Kivetz & Zheng, 2017; Sinha & Verma, 2020).

In the present study, cognitive depletion has the largest effect on "attitude" (β = 0.553), followed by utilitarian perception (β = 0.359), and hedonic perception has the least effect (β = 0.086). This is a clear indication of the fact that, during online midnight shopping, consumers frame their attitude toward purchase without much thinking and less search for information. The time-bound shopping develops stress in them and fails to distinguish product attributes. Moreover, this cognitive depletion significantly influences hedonic (β = 0.328) and utilitarian perceptions (β = 0.695). Thus, consumers have exaggerated enjoyment and curiosity for midnight online time-bound shopping under stressful and tired conditions. Likewise, customers are tempted to assume more usefulness for the product. Among the indicating variables studied, CD2—sleepy and tired to search for information (0.918)—, HVP4—creates surprise and curiosity (0.971)—, UVP2—saves time and cost (0.867), and AT1—no need to dress well to go out (0.879)—contributed to the latent variables namely cognitive depletion, hedonic value perception, utilitarian perception, and attitude respectively. In the case of mediation of HVP, if we compare the effect of cognitive depletion on hedonic value perception and attitude, it is highest (direct effect) on attitude (β = 0.400, $p \leq 0.001$), and in the case of mediation of UVP, if we compare the effect of cognitive depletion on utilitarian value perception and attitude, it is highest (direct effect) on UVP (β = 0.557, $p \leq 0.001$).

Our research is unique in that it tries to prove that cognitive depletion at midnight directly affects consumer perception formation. Along with bringing a rarely discussed concept, "cognitive depletion," into consumer behavior, this study highlights the relevance of midnight online time-bound offers as a sales promotion strategy. Here, we aim to measure how cognitive depletion, directly and indirectly, propels consumers' attitudes toward online sales promotion, contributing to the Cinderella shopping habit. The partial mediation effects of both perceptions (hedonic and utilitarian) in the relation between cognitive depletion and attitude make this research exceptional. To conclude, given that we are living in the digital world, research focusing on human psychology will help to better understand customers as human beings and how this works in online marketing techniques.

Implications

Theoretical Implications

Our research is quite interesting as it benefits webpreneurs and e-marketers to consider "cognitive depletion," an important factor influencing midnight online consumers' perceptions and shopping decisions while designing their sales promotion strategies. Here, we measured and established all the proposed hypotheses that cognitive depletion at midnight impacts consumers' hedonic and utilitarian value perceptions and attitudes positively and significantly. Therefore, we propose considering cognitive depletion as a variable while discussing midnight online shopping. The mediation effect test results also indicate that cognitive depletion contributes directly to the variations in the attitude toward midnight online time-bound sales promotion and indirectly via hedonic and utilitarian value perception. Besides, our findings especially show that both hedonic and utilitarian value perceptions can stimulate consumers' shopping behavior, which aligns with the existing studies (Sinha & Verma, 2020). Thus, the current study proves that, like in daytime shopping, consumers are always interested in enjoying the benefits of midnight sales promotions. Hence, this study adds to the existing literature explaining a model of midnight time-bounded online consumer behavior.

Managerial Implications

In the fast-paced world of e-commerce, the key to success lies in embracing a more strategic approach to online sales promotions. It is no longer a secret that a deep understanding of shifting online shopping habits and their influencing factors is crucial for retailers to thrive and enhance their market value. By unlocking the secrets of

Cinderella shopping behavior, where cognitive depletion, hedonic value perception, utilitarian value perception, and attitude intertwine, we gain a fascinating glimpse into the psychology of late-night shopping habits for digital marketers and online business innovators. Our findings provide invaluable managerial insights for online retailers, e-commerce entrepreneurs, and sales promotion managers, shedding light on how they can captivate customers' attention and craft engaging as well as inventive websites and online marketplaces that leave a lasting impact. By delving into cognitive depletion, we can understand how consumers make purchase decisions while experiencing fatigue. This knowledge enables online sellers to tailor and manage their marketing efforts to cater to this state of mind.

Moreover, by understanding the allure of utilitarian value perception and hedonic value perception, entrepreneurs can curate experiences that better satisfy customers during late-night browsing. For instance, from the perspective of hedonic value perception, online traders can provide a pleasurable shopping experience. They can incorporate various interactive games during the purchase process to attract hedonic-oriented customers during the night. Similarly, during bedtime, customers may perceive more potential uses for products they encounter online compared to daytime, influenced by cognitive depletion and possible hallucinations. In doing so, webpreneurs can fine-tune their offerings and provide the seamless experiences consumers crave. Thus, e-marketers can leverage and succeed in sensory excitement by incorporating time-bound discounts associated with sales promotions in their midnight advertisements. By taking the initiative to go with researchers and the e-business management team hand in hand, there is a high potential to drive increased digital foot traffic to traders' websites.

Limitations of the Study and Scope for Future Research

Like any other study, it is also not free from limitations. For the study, purposive sampling was applied, and it was non-probabilistic sampling. This study focused on midnight online shopping among general customers, and as a limitation, it does not categorize customers based on the products or services they shop for. We also failed to build and examine how cognitive depletion may simultaneously impact consumer buying decisions, i.e., attitude formation and intention. Here, we speculated that consumers seeking all kinds of products have the same amount of reflex toward bedtime-restricted sales promotion strategy. Again, cognitive depletion is a psychological concept that can be measured with other psychoanalytical methods.

In the future, some other research questions can also be attempted: Does the mental tiredness at night transcend hallucinated hedonic and utilitarian value perceptions about the products being offered at midnight on online platforms, and does it lead to a positive effect on their purchase decision? Does the feeling of no product feature difference or sleepiness enhance customers' pleasure experience and usefulness for the products, leading to a positive attitude toward Cinderella shopping? Would this influence of perceptions created by cognitive depletion on the Cinderella shopping habit differ for hedonic value (i.e., It brings me a sense of surprise and curiosity) and utilitarian value (i.e., Can I find more usefulness for products)? The activeness of cognition on shopping habits and the comparatively less direct effect of the same on attitude than on perceptual value formation also awaken curiosity. It will be worth knowing how cognitive depletion occurs at different periods and at what levels it impacts customer search for products and purchase decisions. Accordingly, more research that discusses cognitive depletion is highly deserved.

Authors' Contribution

Dr. Jasmine V. M. conceived the idea and developed qualitative and quantitative designs for the empirical study. She extracted the research papers of high repute, filtered them based on keywords, and generated concepts and

codes relevant to the study design. Dr. Nithin Jose developed the data collection tool (questionnaire) and managed the survey. Sruthiya V. N. verified the analytical methods and supervised the study. The analysis part of the study was done by Dr. Jasmine V. M. using SPSS. 25 and Jamovi 2.3.28. Sruthiya V. N. wrote the manuscript in consultation with both authors.

Conflict of Interest

The authors certify that they have no affiliations with or involvement in any organization or entity with any financial interest or non-financial interest in the subject matter or materials discussed in this manuscript.

Funding Acknowledgement

The authors received no financial support for the research, authorship, and/or for the publication of this article.

References

Abdelkhair, F. Y., Babekir, M. Y., Mudawi, S. S., & Abiad, A. B. (2023). Sales promotion and impulse buying behavior towards consumer goods: The mediating role of purchase intention. *Indian Journal of Marketing, 53*(2), 26–42. https://doi.org/10.17010/ijom/2023/v53/i2/172631

Alhola, P., & Polo-Kantola, P. (2007). Sleep deprivation: Impact on cognitive performance. *Neuropsychiatric Disease and Treatment, 3*(5), 553–567. https://doi.org/10.2147/ndt.s12160203

Atkins, K. G., & Hyun, S.-Y. (2016). Smart shoppers' purchasing experiences: Functions of product type, gender, and generation. *International Journal of Marketing Studies, 8*(2), 1–12. https://doi.org/10.5539/ijms.v8n2p1

Bagozzi, R. P., Yi, Y., & Phillips, L. W. (1991). Assessing construct validity in organizational research. *Administrative Science Quarterly, 36*(3), 421–458. https://doi.org/10.2307/2393203

Bandyopadhyay, N., Sivakumaran, B., Patro, S., & Kumar, R. S. (2021). Immediate or delayed! Whether various types of consumer sales promotions drive impulse buying?: An empirical investigation. *Journal of Retailing and Consumer Services, 61,* 102532. https://doi.org/10.1016/j.jretconser.2021.102532

Baumeister, R. F., Bratslavsky, E., Muraven, M., & Tice, D. M. (1998). Ego depletion: Is the active self a limited resource? *Journal of Personality and Social Psychology, 74*(5), 1252–1265. https://doi.org/10.1037/0022-3514.74.5.1252

Bei, L.-T., & Chen, M.-Y. (2015). The effects of hedonic and utilitarian bidding values on e-auction behavior. *Electronic Commerce Research, 15*, 483–507. https://doi.org/10.1007/s10660-015-9197-0

Calvo, M. G., & Gutiérrez-García, A. (2016). Chapter 16 - Cognition and stress. In *Stress: Concepts, cognition, emotion, and behavior* (pp. 139–144). Academic Press. https://doi.org/10.1016/B978-0-12-800951-2.00016-9

Chen, H.-S., Liang, C.-H., Liao, S.-Y., & Kuo, H.-Y. (2020). Consumer attitudes and purchase intentions toward food delivery platform services. *Sustainability, 12*(23), 10177. https://doi.org/10.3390/su122310177

Chetioui, Y., & El Bouzidi, L. (2023). An investigation of the nexus between online impulsive buying and cognitive dissonance among Gen Z shoppers: Are female shoppers different? *Young Consumers*, *24*(4), 406–426. https://doi.org/10.1108/YC-06-2022-1548

Childers, T. L., Carr, C. L., Peck, J., & Carson, S. (2001). Hedonic and utilitarian motivations for online retail shopping behavior. *Journal of Retailing, 77*(4), 511–535. https://doi.org/10.1016/S0022-4359(01)00056-2

Chiou, J.-S., & Ting, C.-C. (2011). Will you spend more money and time on internet shopping when the product and situation are right? *Computers in Human Behavior, 27*(1), 203–208. https://doi.org/10.1016/j.chb.2010.07.037

Chiu, C.-M., Wang, E. T., Fang, Y.-H., & Huang, H.-Y. (2014). Understanding customers' repeat purchase intentions in B2C e-commerce: The roles of utilitarian value, hedonic value, and perceived risk. *Information Systems Journal, 24*(1), 85–114. https://doi.org/10.1111/j.1365-2575.2012.00407.x

Caesar, C. (2023, November 9). Unusual shopping behaviours beyond drunk shopping and midnight splurges. *Salsify*. https://www.salsify.com/blog/unusual-shopping-behaviors-drunk-midnight-shopping

Chung, Y.-S. (2015). Hedonic and utilitarian shopping values in airport shopping behavior. *Journal of Air Transport Management, 49*, 28–34. https://doi.org/10.1016/j.jairtraman.2015.07.003

Coyne, J. C., & Gotlib, I. H. (1983). The role of cognition in depression: A critical appraisal. *Psychological Bulletin, 94*(3), 472–505. https://doi.org/10.1037/0033-2909.94.3.472

Dangi, N., Narula, S. A., & Gupta, S. K. (2020). Influences on purchase intentions of organic food consumers in an emerging economy. *Journal of Asia Business Studies, 14*(5), 599–620. https://doi.org/10.1108/JABS-12-2019-0364

Das, G., Mukherjee, A., & Smith, R. J. (2018). The perfect fit: The moderating role of selling cues on hedonic and utilitarian product types. *Journal of Retailing, 94*(2), 203–216. https://doi.org/10.1016/j.jretai.2017.12.002

Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User acceptance of computer technology: A comparison of two theoretical models. *Management Science, 35*(8), 982–1003. https://doi.org/10.1287/mnsc.35.8.982

Djelassi, S., Godefroit-Winkel, D., & Diallo, M. F. (2018). Does culture affect the relationships among utilitarian and non-utilitarian values, satisfaction, and loyalty to shopping centers? Evidence from two Maghreb countries. *International Journal of Retail & Distribution Management, 46*(11–12), 1153–1169. https://doi.org/10.1108/IJRDM-06-2017-0131

Engin, A., & Vetschera, R. (2017). Information representation in decision making: The impact of cognitive style and depletion effects. *Decision Support Systems, 103*, 94–103. https://doi.org/10.1016/j.dss.2017.09.007

Fechner, H. B., Schooler, L. J., & Pachur, T. (2018). Cognitive costs of decision-making strategies: A resource demand decomposition analysis with a cognitive architecture. *Cognition, 170*, 102–122. https://doi.org/10.1016/j.cognition.2017.09.003

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equations models with unobservable variables and measurement error. *Journal of Marketing Research, 18*(1), 39–50. https://doi.org/10.1177/002224378101800104

Fuller, C. M., Simmering, M. J., Atinc, G., Atinc, Y., & Babin, B. J. (2016). Common methods variance detection in business research. *Journal of Business Research, 69*(8), 3192–3198. https://doi.org/10.1016/j.jbusres.2015.12.008

Geiger, S. (2007). Exploring night-time grocery shopping behaviour. *Journal of Retailing and Consumer Services, 14*(1), 24–34. https://doi.org/10.1016/j.jretconser.2006.03.001

Hair, J., Hollingsworth, C. L., Randolph, A. B., & Chong, A. Y. (2017). An updated and expanded assessment of PLS-SEM in information systems research. *Industrial Management & Data Systems, 117*(3), 442–458. https://doi.org/10.1108/IMDS-04-2016-0130

Halkiopoulos, C., Antonopoulou, H., Gkintoni, E., & Aroutzidis, A. (2022). Neuromarketing as an indicator of cognitive consumer behavior in decision-making process of tourism destination — An overview. In V. Katsoni & A. C. Şerban (eds.), *Transcending borders in tourism through innovation and cultural heritage* (pp. 679–697). Springer. https://doi.org/10.1007/978-3-030-92491-1_41

Hirschman, E. C., & Holbrook, M. B. (1982). Hedonic consumption: Emerging concepts, methods and propositions. *Journal of Marketing*, *46*(3), 92–101. https://doi.org/10.1177/002224298204600314

Izogo, E. E., & Jayawardhena, C. (2018). Online shopping experience in an emerging e-retailing market. *Journal of Research in Interactive Marketing, 12*(2), 193–214. https://doi.org/10.1108/JRIM-02-2017-0015

Jacoby, J. (1984). Perspectives on information overload. *Journal of Consumer Research, 10*(4), 432−435. http://www.jstor.org/stable/2488912

Jain, K., Gautam, S., & Pasricha, D. (2018). The pleasure and the guilt - Impulse purchase and post purchase regret: A study of young Indian consumers. *Indian Journal of Marketing, 48*(3), 49–63. https://doi.org/10.17010/ijom/2018/v48/i3/121984

Jee, T. W. (2021). The perception of discount sales promotions – A utilitarian and hedonic perspective. *Journal of Retailing and Consumer Services, 63*, 102745. https://doi.org/10.1016/j.jretconser.2021.102745

Johnson, E. J. (2008). Man, my brain is tired: Linking depletion and cognitive effort in choice. *Journal of Consumer Psychology, 18*(1), 14–16. https://doi.org/10.1016/j.jcps.2007.10.003

Johnson, E. J., & Payne, J. W. (1985). Effort and accuracy in choice. *Management Science, 31*(4), 395–414. https://doi.org/10.1287/mnsc.31.4.395

Kawachi, I., & Berkman, L. F. (2001). Social ties and mental health. *Journal of Urban Health, 78,* 458–467. https://doi.org/10.1093/jurban/78.3.458

Kivetz, R., & Zheng, Y. (2017). The effects of promotions on hedonic versus utilitarian purchases. *Journal of Consumer Psychology, 27*(1), 59–68. https://doi.org/10.1016/j.jcps.2016.05.005

Kusumawardani, K. A., Widyanto, H. A., & Tambunan, J. E. (2023). The role of gamification, social, hedonic and utilitarian values on e-commerce adoption. *Spanish Journal of Marketing - ESIC, 27*(2), 158–177. https://doi.org/10.1108/SJME-09-2022-0188

La Barbera, F., & Ajzen, I. (2022). Instrumental vs. experiential attitudes in the theory of planned behaviour: Two studies on intention to perform a recommended amount of physical activity. *International Journal of Sport and Exercise Psychology,* 1–13. https://doi.org/10.1080/1612197X.2022.2161107

Lawrie, E., Hay, L., & Wodehouse, A. (2023). A classification of methods and constructs in design cognition research. In J. S. Gero (ed.), *Design Computing and Cognition'22* (pp. 97–114). Springer. https://doi.org/10.1007/978-3-031-20418-0_7

Lee, C.-H., & Wu, J. J. (2017). Consumer online flow experience: The relationship between utilitarian and hedonic value, satisfaction and unplanned purchase. *Industrial Management & Data Systems, 117*(10), 2452–2467. https://doi.org/10.1108/IMDS-11-2016-0500

Li, T., Li, W., Zhao, Y., & Ma, J. (2023). Rationality manipulation during consumer decision-making process: An analysis of Alibaba's online shopping carnival. *Electronic Commerce Research, 23*(1), 331–364. https://doi.org/10.1007/s10660-022-09567-3

Li, X., Zhao, X., Xu, W., & Pu, W. (2020). Measuring ease of use of mobile applications in e-commerce retailing from the perspective of consumer online shopping behaviour patterns. *Journal of Retailing and Consumer Services, 55,* 102093. https://doi.org/10.1016/j.jretconser.2020.102093

Lu, J., Liu, Z., & Fang, Z. (2016). Hedonic products for you, utilitarian products for me. *Judgment and Decision Making, 11*(4), 332–341. https://doi.org/10.1017/S1930297500003764

Mishra, S., & Kar, B. (2023). Exploring compassion-buying behavior among demographic segments during COVID-19. *Indian Journal of Marketing, 53*(5), 41–56. https://doi.org/10.17010/ijom/2023/v53/i5/172726

Newell, B. R., & Shanks, D. R. (2014). Unconscious influences on decision making: A critical view. *Behavioral and Brain Sciences, 37*(1), 1–9. https://doi.org/10.1017/S0140525X12003214

Ozkara, B. Y., Ozmen, M., & Kim, J. W. (2017). Examining the effect of flow experience on online purchase: A novel approach to the flow theory based on hedonic and utilitarian value. *Journal of Retailing and Consumer Services, 37,* 119–131. https://doi.org/10.1016/j.jretconser.2017.04.001

Pahari, S., Ghosal, I., Prasad, B., & Dildar, S. M. (2023). Which determinants impact consumer purchase behavior toward online purchasing of organic food products? *Prabandhan: Indian Journal of Management, 16*(1), 25–41. https://doi.org/10.17010/pijom/2023/v16i1/172667

Pang, H. (2021). Identifying associations between mobile social media users' perceived values, attitude, satisfaction, and eWOM engagement: The moderating role of affective factors. *Telematics and Informatics, 59,* 101561. https://doi.org/10.1016/j.tele.2020.101561

Payne, J. W., Bettman, J. R., Schkade, D. A., Schwarz, N., & Gregory, R. (1999). Measuring constructed preferences: Towards a building code. In B. Fischhoff & C. F. Manski (eds.), *Elicitation of preferences* (pp. 243–275). Springer. https://doi.org/10.1007/978-94-017-1406-8_9

Podsakoff, P. M., & Organ, D. W. (1986). Self-reports in organizational research: Problems and prospects. *Journal of Management, 12*(4), 531–544. https://doi.org/10.1177/014920638601200408

Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88*(5), 879–903. https://doi.org/10.1037/0021-9010.88.5.879

Rabipour, S., Mahmood, E. A., Afsharkhas, M., & Abbasi, V. (2022). Cannabinoids impact on cognition: A review from the neurobiological perspective. *Chemical Review and Letters, 6*(1), 7–14. https://doi.org/10.22034/CRL.2022.347354.1174

Rafael, D. N., & Lopes, E. L. (2023). Ego depletion in consumer behavior: A review, synthesis, and research agenda. *Journal of Consumer Behaviour, 22*(3), 755–781. https://doi.org/10.1002/cb.2148

Ringle, C. M., Sarstedt, M., Sinkovics, N., & Sinkovics, R. R. (2023). A perspective on using partial least squares structural equation modeling in data articles. *Data in Brief*, *48*, 109074. https://doi.org/10.1016/j.dib.2023.109074

Saptono, L., Soetjipto, B. E., Wahjoedi, & Wahyono, H. (2019). The influence of financial quantitative literacy and subjective numeracy on impulsive consumption with materialism as the mediator variable. *Indian Journal of Marketing, 49*(10), 23–41. https://doi.org/10.17010/ijom/2019/v49/i10/147563

Sarkar, M. B., Echambadi, R., & Harrison, J. S. (2001). Alliance entrepreneurship and firm market performance. *Strategic Management Journal, 22*(6–7), 701–711. https://doi.org/10.1002/smj.179

Schmidt, C., Collette, F., Cajochen, C., & Peigneux, P. (2007). A time to think: Circadian rhythms in human cognition. *Cognitive Neuropsychology, 24*(7), 755–789. https://doi.org/10.1080/02643290701754158

Sen, S. (2023). Developing the M-H-IB model to explain the mediational role of hedonism on materialism and impulse buying relationship: Proposing a research framework. *Indian Journal of Marketing, 53*(4), 65–75. https://doi.org/10.17010/ijom/2023/v53/i4/172690

Sharma, P., Gupta, S., & Kapoor, D. (2020). Digital marketing and consumer millennials: A comparative study of men, women, and transgender consumers' buying behaviour in Punjab. *Indian Journal of Marketing, 50*(3), 47–57. https://doi.org/10.17010/ijom/2020/v50/i3/151029

Shihab, M. R., & Putri, A. P. (2019). Negative online reviews of popular products: Understanding the effects of review proportion and quality on consumers' attitude and intention to buy. *Electronic Commerce Research, 19,* 159–187. https://doi.org/10.1007/s10660-018-9294-y

Sinha, S. K., & Verma, P. (2020). Impact of sales promotion's benefits on perceived value: Does product category moderate the results? *Journal of Retailing and Consumer Services, 52,* 101887. https://doi.org/10.1016/j.jretconser.2019.101887

Tabor, E. (n.d.). Cindrella shopping: How to coach yourself up for this new trend. *Media Monks*. https://media.monks.com/articles/cinderella-shopping-how-coach-yourself-new-trend

Tomar, R. S., Tomar, D., & Tomar, V. S. (2023). Impulsive buying among youth: A dominating component of compulsive buying behavior. *Indian Journal of Marketing, 53*(10), 8–23. https://doi.org/10.17010/ijom/2023/v53/i10/171988

Tomar, V. S., Sharma, A., & Pandey, N. (2018). Perceived benefits of online shopping : Scale modification and validation. *Indian Journal of Marketing, 48*(12), 7–22. https://doi.org/10.17010/ijom/2018/v48/i12/139553

Tsai, Y.-T., & Tiwasing, P. (2021). Customer's intention to adopt smart lockers in last-mile delivery service: A multi-theory perspective. *Journal of Retailing and Consumer Services, 61,* 102514. https://doi.org/10.1016/j.jretconser.2021.102514

Tuttle, B. (2019, September 12). Why you're buying stuff on your phone at 2 a.m. Instead of sleeping, according to a consumer psychologist. *Money Group*. https://money.com/online-shopping-late-night-impulse-buy-stress/

Wagner, G., Schramm-Klein, H., & Steinmann, S. (2020). Online retailing across e-channels and e-channel touchpoints: Empirical studies of consumer behavior in the multichannel e-commerce environment. *Journal of Business Research, 107,* 256–270. https://doi.org/10.1016/j.jbusres.2018.10.048

Wang, E., & Yu, J.-R. (2016). Effect of product attribute beliefs of ready-to-drink coffee beverages on consumer-perceived value and repurchase intention. *British Food Journal, 118*(12), 2963–2980. https://doi.org/10.1108/BFJ-03-2016-0128

Wittmann, M., & Paulus, M. P. (2008). Decision making, impulsivity, and time perception. *Trends in Cognitive Sciences, 12*(1), 7–12. https://doi.org/10.1016/j.tics.2007.10.004

Wu, X., & Liao, H. (2021). Modeling personalized cognition of customers in online shopping. *Omega, 104,* 102471. https://doi.org/10.1016/j.omega.2021.102471

Xu, X., Li, Q., Peng, L., Hsia, T.-L., Huang, C.-J., & Wu, J.-H. (2017). The impact of informational incentives and social influence on consumer behavior during Alibaba's online shopping carnival. *Computers in Human Behavior, 76,* 245–254. https://doi.org/10.1016/j.chb.2017.07.018

Yan, Q., Wang, L., Chen, W., & Cho, J. (2016). Study on the influencing factors of unplanned consumption in a large online promotion activity. *Electronic Commerce Research, 16*, 453–477. https://doi.org/10.1007/s10660-016-9215-x

Yin, J., & Qiu, X. (2021). AI technology and online purchase intention: Structural equation model based on perceived value. *Sustainability, 13*(10), 5671. https://doi.org/10.3390/su13105671

Zeithaml, V. A. (1988). Consumer perceptions of price, quality, and value: A means-end model and synthesis of evidence. *Journal of Marketing, 52*(3), 2–22. https://doi.org/10.1177/002224298805200302

Zemack-Rugar, Y., Rabino, R., Cavanaugh, L. A., & Fitzsimons, G. J. (2016). When donating is liberating: The role of product and consumer characteristics in the appeal of cause-related products. *Journal of Consumer Psychology, 26*(2), 213–230. https://doi.org/10.1016/j.jcps.2015.06.001

Zheng, X., Liu, N., & Zhao, L. (2013). *A study of the effectiveness of online scarce promotion — Based on the comparison of planned buying and unplanned buying* (WHICEB 2013 Proceedings. 51). https://aisel.aisnet.org/whiceb2013/51

Zirena-Bejarano, P. P., & Zirena, E. M. (2023). Mediating effect of subjective norms in the relationship between attitude and online purchase decision. *Indian Journal of Marketing*, *53*(7), 30–45. https://doi.org/10.17010/ijom/2023/v53/i7/170032

Appendix

The items to measure the Cinderella-shopping behaviour are given below:

Constructs		Description/Questions	Items
Cognitive	While doing midnight/Cinderella shopping	I feel no need to think much.	*CD1*
Depletion		I do less information search as I am sleepy and tired.	*CD2*
		I feel there are not many differences in colors, shapes, offers, etc.	*CD3*
		I feel a little bit stressed due to the time limit and restrictions.	*CD4*
Hedonic Value	Midnight online shopping	It makes me feel very happy.	*HVP1*
Perception		It makes me feel very relaxed.	*HVP2*
		It arouses my shopping desire.	*HVP3*
		It brings me a sense of surprise and curiosity.	*HVP4*
Utilitarian Value	Midnight online shopping,	I think it is more convenient.	*UVP1*
Perception		It can save me more time and cost.	*UVP2*
		I can find more usefulness for products.	*UVP3*
		I find future utility for my purchases.	*UVP4*
Attitude	During midnight online shopping	No need to dress up well and go out.	*AT1*
		I must do more shopping before closing the discounts and offers.	*AT2*
		I got a feeling of winning when I was able to save.	*AT3*
		I feel it is improving my shopping efficiency.	*AT4*
Cinderella Shopping	I do Cinderella Shopping	Very Often	*CSH1*
Habit		Often	*CSH2*
		Sometimes	*CSH3*
		Rarely	*CSH4*

About the Authors

Dr. Jasmine V. M. has been the Assistant Professor in Commerce at St. Joseph's College (Autonomous), Devagiri, for 11 years. She completed her Ph.D. at the University of Calicut in 2022, and her area of interest is marketing and consumer behavior. She has published articles in CARE-listed and ABDC-indexed journals.

Dr. Nithin Jose, with a decade of post-graduate commerce teaching at St. Joseph's College (Autonomous), Devagiri, specializes in behavioral finance and derivatives research. He publishes in prestigious journals such as *Finance Research Letters and Asia-Pacific Financial Markets.* He also presents his research at renowned conferences organized by institutions like the IIM and NISM, showcasing his expertise in academia and research dissemination.

Sruthiya V. N. has been an Assistant Professor in Commerce at St. Joseph's College (Autonomous), Devagiri, for 11 years, pursuing research at a center affiliated with Calicut University. She has published articles in CARE-listed and peer-reviewed journals specializing in marketing and is committed to actively enriching the academic community.