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Emotion-Driven User Experience on Elderly Women's Impulse Buying: A Kano Model study

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Abstract
Emotion-driven UX design shapes consumer behavior and impacts public life and the elderly environment by influencing purchases and digital interactions. This study examines how it affects impulse buying among women 50-59 in online fashion shopping. Using the Kano model, it categorizes UX elements—visual appeal, social interaction, and personalized recommendations—into basic, performance, and attractive needs. A survey of 265 women finds emotionally engaging features drive impulse purchases but limit impact on loyalty. Key findings highlight visual aesthetics and personalization. This research offers insights for optimizing UX to enhance engagement and purchasing behavior, with implications for future studies.

Keywords: Emotion-Driven User Experience, Elderly Women, Impulse Buying, Kano Model

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1.0 Introduction

1.1 Background and Significance

Impulse buying, defined as unplanned purchasing decisions driven by emotional stimulation, has become increasingly prevalent in the context of social media shopping. Emotion-driven UX designs, incorporating elements such as visual aesthetics, personalized recommendations, and social interactions, play a crucial role in fostering emotional engagement and influencing purchasing behavior (Li et al., 2022). Middle-aged women aged 50–59, who value authenticity and emotional resonance, represent a significant yet underserved demographic in e-commerce research. Despite their growing purchasing power and digital adoption, existing studies have predominantly focused on younger consumers or male users, leaving the specific needs and behaviors of this group underexplored (Peng, 2023; Zhang & Zhang, 2024). As these demographic transitions from traditional shopping to e-commerce, their engagement with social media shopping platforms has intensified. However, many platforms fail to provide UX designs that align with their emotional and functional needs. Features such as visually engaging content, tailored recommendations, and interactive elements have shown the potential to enhance satisfaction and encourage impulse purchases, yet their application remains inconsistent across platforms (Chen et al., 2022; Guido et al., 2022). Understanding how these features impact middle-aged women's shopping behavior is essential for improving user satisfaction, driving engagement, and enhancing platform competitiveness.

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To address this gap, this study applies the Kano model, a structured framework that categorizes user needs into basic, performance, and attractive attributes (Xu et al., 2009). By linking UX features to user satisfaction and emotional engagement, the Kano model offers valuable insights for optimizing e-commerce platforms to meet the specific needs of middle-aged women. This research seeks to bridge the gap between emotional engagement and impulse buying behavior, contributing to both academic literature and practical UX strategies.

1.2 Research Questions and Objectives

This study explores how emotion-driven UX elements, including visual aesthetics, personalized recommendations, and social interactions, influence impulse buying behavior among middle-aged women aged 50–59. By applying the Kano model, it seeks to identify which UX features most effectively foster emotional engagement, building on findings that emotional stimuli significantly impact purchasing decisions in digital environments (Li et al., 2022; Peng, 2023). The research further evaluates how these features align with the unique preferences of this demographic, who prioritize authenticity and emotional resonance (Guido et al., 2022; Zhang & Zhang, 2024). Ultimately, this study aims to provide actionable strategies for optimizing e-commerce platform design, contributing to both academic understanding and practical applications in enhancing user satisfaction and engagement (Xu et al., 2009).

2.0 Literature Review

2.1 Emotion-driven user experience (UX)

Emotion-driven UX design aims to evoke specific emotional responses through elements such as visual aesthetics, personalized recommendations, and social interactions, enhancing user engagement and satisfaction (Chen et al., 2022). Innovations like AI and VR have further elevated the role of emotional engagement by tailoring shopping experiences and creating immersive environments (Nikolinakou et al., 2024). However, most studies focus on younger consumers, overlooking the potential of such designs to address the emotional needs of middle-aged women. This research bridges this gap by exploring how UX elements can be optimized to meet the expectations of this demographic, particularly in fostering impulse buying behavior.

2.2 Elderly Consumers and Shopping on Social Media

Middle-aged women aged 50–59 form a distinct demographic in e-commerce due to their preference for authenticity, trust, and emotional resonance (Guido et al., 2022). While they increasingly engage with social media platforms for shopping, current UX designs often fail to align with their unique needs. Features like visually appealing interfaces and personalized recommendations resonate strongly with this group, yet most platforms primarily cater to younger audiences (Peng, 2023). Addressing these gaps is essential for creating inclusive and effective UX strategies tailored to middle-aged women.

2.3 Impulse Buying Behavior

Impulse buying, characterized by unplanned purchasing triggered by emotional stimuli, is heavily influenced by visually engaging advertisements, real-time interactions, and promotional offers (Anoop & Rahman, 2024). Emotional triggers such as excitement and pleasure amplify impulsive decisions, particularly in dynamic social media environments (Rejón-Guardia, 2024). While previous research emphasizes younger consumers, little is known about how these triggers impact middle-aged women's behavior. This study addresses this void by focusing on the interplay between emotional engagement and impulse buying among this demographic.

2.4 The Kano Model

The Kano model categorizes user needs into basic, performance, and attractive attributes, offering a systematic approach to optimizing UX design (Xu et al., 2009). It has been widely applied to e-commerce for prioritizing features that enhance user satisfaction and emotional engagement (Ingaldi & Ulewicz, 2019). Despite its effectiveness, limited research explores its application to emotion-driven UX for middle-aged women. This study extends its use by analyzing how UX features categorized through the Kano model influence user satisfaction and impulse buying behavior, providing actionable insights for e-commerce optimization.

While previous studies (e.g., Guido et al., 2022; Peng, 2023) have examined impulse buying behavior in digital environments, they predominantly focus on younger consumers, overlooking the growing participation of middle-aged women in online shopping. For instance, Guido et al. (2022) analyzed how aging consumers engage with e-commerce platforms but did not explore the role of emotion-driven UX elements in shaping their purchasing decisions. Similarly, Peng (2023) investigated female consumer empowerment in online media but lacked an in-depth examination of how UX design influences impulsive purchasing behaviors. Moreover, existing research on UX optimization (e.g., Ingaldi & Ulewicz, 2019) has applied Kano analysis to general e-commerce user satisfaction but has not tailored it to the unique emotional needs of middle-aged female shoppers. This study bridges these gaps by applying the Kano model to categorize UX elements based on their impact on emotional engagement and impulse buying among women aged 50–59. By integrating emotional UX design principles with behavioral insights, this research provides a structured framework for improving e-commerce experiences for an underrepresented consumer segment.

3.0 Methodology

3.1 Research Approach

This study adopts a quantitative research approach to explore the impact of emotion-driven UX design on impulse buying behavior among women aged 50–59. The Kano model was selected over other UX evaluation frameworks, such as the Technology Acceptance Model (TAM) and SERVQUAL, due to its ability to classify user needs into five attributes—basic, performance, attractive, indifferent, and reverse—based on satisfaction and dissatisfaction dynamics. While TAM primarily assesses users' acceptance of technology and SERVQUAL focuses on perceived service quality, the Kano model uniquely differentiates UX elements based on their potential to evoke emotional engagement and behavioral responses. This makes it particularly suited for studying impulse buying behavior, which is strongly influenced by emotional stimuli rather than purely functional assessments. For example, features that generate high satisfaction when present but cause minimal dissatisfaction when absent are categorized as attractive needs. This allows for a nuanced analysis of which UX elements delight users versus which merely meet their expectations. Unlike traditional models, the Kano framework provides dual insights into satisfaction and dissatisfaction, enabling a deeper understanding of how different UX features contribute to emotional engagement and purchase behavior.

By applying the Kano model, this study offers a structured approach to prioritizing UX elements that not only enhance user satisfaction but also encourage impulsive purchasing decisions. This model's ability to link emotional responses to consumer behavior makes it an ideal tool for optimizing UX design in e-commerce platforms targeting middle-aged female shoppers.

3.2 Research Approach

Data were collected from a purposive sample of 265 women aged 50–59 who regularly engage in online fashion shopping via social media platforms. Participants were recruited through targeted advertisements on social media and referrals from community forums. To ensure the sample's representativeness, selection criteria included age (50–59 years), monthly income (5,000–10,000 RMB), and shopping frequency (at least once per month). This demographic alignment ensures the sample reflects the target population's characteristics, providing reliable insights into their emotion-driven purchasing behavior.

The primary data collection tool was a structured questionnaire based on the Kano model, comprising three sections: (1) demographic information, (2) emotion-driven UX features, and (3) impulse buying behavior. Questions were measured on a 5-point Likert scale, ranging from "strongly disagree" to "strongly agree." A pilot study with 30 participants was conducted to refine question clarity and ensure alignment with the research objectives. Reliability testing using Cronbach's alpha yielded a value of 0.723, indicating acceptable internal consistency. Furthermore, validity tests, including the Kaiser-Meyer-Olkin (KMO) measure (0.918) and Bartlett's test of sphericity ($\chi^2 = 3679.149$, $p < 0.001$), confirmed the dataset's suitability for factor analysis.

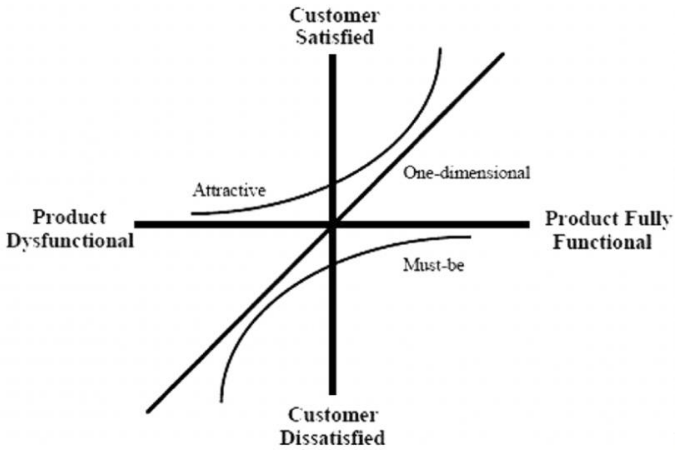

Fig. 1: Kano model

(Source: Ingaldi & Ulewicz, 2019)

Figure 1 presents the results of the Kano model evaluation, categorizing user feedback into five attributes: basic (essential), performance (expectation), attractive (charisma), indifferent, and reverse. These categories reveal how users perceive specific UX features in terms of their expectations and satisfaction levels. For example, features classified as "attractive" generate significant delight when present but cause minimal dissatisfaction when absent, highlighting their potential to enhance emotional engagement. By analyzing these classifications, the study provides actionable insights for optimizing UX features to better align with user needs.

Item	Question
A1 & A2	How do you feel if the platform's page design is aesthetically pleasing?
B1 & B2	How do you feel if the platform's color scheme and layout are visually harmonious?
C1 & C2	How do you feel if the platform includes dynamic visual elements (e.g., animations, videos) that are appealing?
D1 & D2	How do you feel if the system recommends products based on your preferences?
E1 & E2	How do you feel if the recommended products are diverse?
F1 & F2	How do you feel if the platform automatically recommends products that match your interests or browsing history?
G1 & G2	How do you feel if the platform provides a product review feature?
H1 & H2	How do you feel if you can share your shopping experience via the platform?
I1 & I2	How do you feel if the platform includes "like" and interactive features?
J	Have you ever purchased an unplanned product due to its visual design?
K	Would you purchase a product immediately due to a time-limited discount on the platform?
L	Does the attractiveness of product display images influence your purchase decisions?
M	Have you ever purchased a product due to the excitement generated by its advertisement?
N	Have you ever purchased a product due to the joy caused by a promotion?
O1 & O2	How do you feel if the platform's navigation features are convenient?
P1 & P2	How do you feel if the product categories are clearly organized?
Q1 & Q2	How do you feel if the payment process is secure and efficient?
R1 & R2	How do you feel if the platform's security measures make you feel reliable?

(a)

		Frequency and percentage (%)
Gender	Female	265（100%）
Age	50–54 years old	204（77%）
	55–59 years old	61（23%）
Education	Junior high school or below	28（10.6%）
	High school/vocational school	79（29.8%）
	College (diploma)	99（37.4%）
	Bachelor's degree	52（19.6%）
	Postgraduate or above	7（2.6%）
Income	Below 5000 RMB	106（40%）
	5000–10,000 RMB	110（44.9%）
	Above 10,000 RMB	40（15.1%）
Occupation	Retired	43（16.2%）
	Full-time homemaker	14（5.3%）
	Teacher	50（18.9%）
	Administration	23（8.7%）
	Marketing/Sales/Business	30（11.3%）
	Self-employed	37（14%）
	Lawyer/Legal Affairs	8（3%）
	Service Industry Staff	27（10.2%）
	Medical Staff	3（1.1%）
	Freelance	30（11.3%）
Frequency of Social Media Shopping per Month	Less than once	55（20.8%）
	1–3 times	160（60.4%）
	More than 3 times	50（18.9%）
Preferred Social Media Platforms	WeChat	218（82.26%）
	Douyin (TikTok)	182（68.68%）
	Xiaohongshu (RED)	124（46.79%）
	Weibo	42（15.85%）
	Others	1（0.38%）

(b)

Fig. 2. (a) Questionnaire items; (b) Basic information.
(Source: developed by the author)

Figure 2(a) presents the questionnaire items used in the study, covering sections on demographic information, emotion-driven UX features, and impulse buying behavior, structured to align with the Kano model's classification framework. Figure 2(b) summarizes the demographic characteristics of the survey participants, including gender, age, education, income, and occupation. Many respondents were women aged 50–54, with most holding college-level education. Approximately 68% of participants reported monthly incomes between 5,000–10,000 RMB. This demographic profile aligns with the study's target population, ensuring the sample accurately reflects the characteristics of middle-aged women engaging in online fashion shopping.

I have purchased products that I did not plan to buy because of the visual design of the product.	Frequency and Percentage (%)	Buying an item immediately because of a limited time discount on a platform	Frequency and Percentage (%)
Never	21（7.92%）	Never	14（5.28%）
Rarely	21（7.92%）	Rarely	32（12.08%）
Occasionally	34（12.83%）	Occasionally	57（21.51%）
Often	135（50.94%）	Often	79（29.81%）
Always	54（20.38%）	Always	83（31.32%）

Whether the attractiveness of product display images affects your purchasing decision	Frequency and Percentage (%)	Purchase of goods due to excitement generated by advertisements	Frequency and Percentage (%)	Pleased with the promotion and purchased the product	Frequency and Percentage (%)
Never	14（5.28%）	Never	12（4.53%）	Never	16（6.04%）
Rarely	24（9.06%）	Rarely	25（9.43%）	Rarely	25（9.43%）
Occasionally	64（24.15%）	Occasionally	58（21.89%）	Occasionally	68（25.66%）
Often	99（37.36%）	Often	98（36.98%）	Often	83（31.32%）
Always	64（24.15%）	Always	72（27.17%）	Always	73（27.55%）

Fig. 3: Frequency of users' purchasing behaviors in different contexts
(Source: developed by the author)

Figure 3 illustrates the frequency of impulse purchasing behaviors across various contexts, such as product visual design, limited-time platform discounts, and promotional activities. While most participants occasionally made impulse purchases due to these factors, a notable percentage frequently or consistently exhibited such behavior. These findings underscore the critical role of emotion-driven UX elements in influencing purchase decisions, highlighting their significance for optimizing e-commerce platforms.

Despite its strengths, this study has limitations. The sample is limited to Chinese women aged 50–59, which may affect generalizability. Self-reported data could introduce biases, and the cross-sectional design only reflects behavior at a single point. Future research should consider diverse samples, longitudinal methods, and qualitative approaches.

4.0 Findings

4.1 Data analysis and results

The collected data were analyzed using descriptive statistics and the Kano model to classify UX features and evaluate their impact on impulse buying behavior. The descriptive analysis summarized demographic trends and participant responses, indicating a strong preference for visual aesthetics and personalized recommendations. Using the Kano model, UX elements were classified into five categories—basic, performance, attractive, indifferent, and reverse—based on their satisfaction and dissatisfaction coefficients. Features with high Better coefficients, such as visual aesthetics and personalized recommendations, were found to evoke positive emotional engagement, reinforcing their role in driving impulse buying behavior. Conversely, features with high Worse coefficients, such as navigation ease, were identified as essential for maintaining baseline satisfaction. These findings highlight the dual importance of designing features that not only delight users but also avoid dissatisfaction, aligning with the study's goal of understanding how emotion-driven UX design influences purchasing decisions.

Table 1. Reliability analysis

Sample Size	Number of Items	Cronbach's Alpha
265	31	0.723

(Source: developed by the author)

Table 1 shows the reliability analysis results, with a Cronbach's Alpha of 0.723, confirming the questionnaire's internal consistency. This suggests the data collected is reliable and stable for further analysis. Table 4 presents the validity analysis results, including a Kaiser-Meyer-Olkin (KMO) value of 0.918, indicating strong sampling adequacy. Additionally, Bartlett's test of sphericity yielded a Chi-square value of 3679.149 (df = 435, $p < 0.001$), validating the dataset's suitability for factor analysis. These results ensure the robustness of the analysis, supporting the classification of UX elements based on emotional and functional triggers.

Table 2. Validity analysis

KMO & Bartlett		
KMO	0.918	
Bartlett	Approx. Chi-Square	3679.149
	df	435

(Source: developed by the author)

Table 2 presents the results of the validity analysis, which indicate a Kaiser-Meyer-Olkin (KMO) value of 0.918 and a Bartlett's test of sphericity with a Chi-square value of 3679.149 (df = 435). These results confirm the adequacy of the sample for factor analysis. The high KMO value demonstrates strong correlations among variables, while the significant Bartlett's test indicates the suitability of the data structure for factor extraction.

	Service	A	O	M	I	R	Q	Classification	Better	Worse
Emotion-Driven User Experience	A1 & A2	45.28%	0.00%	0.00%	42.64%	11.32%	0.75%	O	78.968	-54.365
	B1 & B2	52.08%	0.00%	0.00%	32.45%	15.09%	0.38%	O	73.279	-48.178
	C1 & C2	52.83%	0.00%	0.00%	32.45%	13.21%	1.51%	O	67.729	-42.629
	D1 & D2	13.96%	41.13%	7.17%	23.02%	13.21%	1.51%	O	61.382	-45.528
	E1 & E2	14.34%	29.81%	9.81%	27.55%	17.36%	1.13%	O	61.29	-49.194
Impulse Buying Behavior	F1 & F2	6.42%	39.62%	14.34%	26.04%	11.32%	2.26%	A	56.504	-38.211
	G1 & G2	16.60%	33.96%	10.94%	23.02%	13.58%	1.89%	A	58.871	-39.919
	H1 & H2	55.09%	0.38%	0.00%	29.81%	13.21%	1.51%	A	60.558	-35.857
	I1 & I2	55.09%	0.75%	0.00%	31.70%	12.08%	0.38%	O	61.728	-49.383
Other User Experience-Related Factors	O1 & O2	8.30%	1.89%	42.26%	35.85%	9.43%	2.26%	O	78.968	-54.365
	P1 & P2	8.30%	41.13%	13.21%	21.51%	11.32%	4.53%	O	73.279	-48.178
	Q1 & Q2	3.40%	1.51%	44.15%	40.38%	9.06%	1.51%	O	67.729	-42.629
	R1 & R2	2.26%	3.40%	52.45%	32.45%	8.68%	0.75%	O	61.382	-45.528

Notes：A：Attractive attribute, O：Performance attribute, M： Must-be attribute, I： Indifferent attribute, R：Reverse attribute, Q：Questionable attribute

Fig. 4: Summary of KANO model analysis results

(Source: developed by the author)

Figure 4 summarizes the KANO model analysis, categorizing services and functions into Attractive (A), Performance (O), Must-be (M), Indifferent (I), Reverse (R), and Questionable (Q) attributes, alongside their Better and Worse coefficients. Emotion-driven user experience attributes (A1 & A2, B1 & B2, C1 & C2, D1 & D2, E1 & E2) are identified as Performance attributes (O), reflecting their essential role in meeting user expectations. High Better coefficients for these attributes highlight their potential for satisfaction improvement, while lower Worse coefficients indicate minimal dissatisfaction if expectations are met. Impulse buying behavior attributes (F1 & F2, G1 & G2, H1 & H2, I1 & I2) are classified as Attractive attributes (A), emphasizing their ability to delight users and foster emotional engagement. Other user experience-related factors (O1 & O2, P1 & P2, Q1 & Q2, R1 & R2) are also categorized as Performance attributes, underlining their importance in maintaining functionality and user trust.

These findings highlight the dual role of UX elements. Performance attributes ensure functional reliability and baseline satisfaction, while Attractive attributes create emotional engagement and competitive differentiation. This analysis aligns with the study's objective of examining how emotion-driven UX design influences impulse buying behavior and underscores the importance of balancing functional stability with emotional resonance to optimize user satisfaction and business outcomes.

4.2 Analysis of Better-Worse Coefficients

Figure 5 visually illustrates the impact of UX features on user satisfaction and dissatisfaction through their Better and Worse coefficients. The horizontal axis represents the Worse coefficient, reflecting the degree of satisfaction decline when a feature is absent, while the vertical axis represents the Better coefficient, indicating the degree of satisfaction increase when a feature is provided. Features such as A1 & A2 (visual aesthetics) and B1 & B2 (personalized recommendations) exhibit high Better coefficients and low Worse coefficients, categorizing them as Attractive attributes. These features significantly enhance user satisfaction by evoking positive emotional responses, making them critical for driving impulse purchases. Their low Worse coefficients suggest that their absence does not substantially impact user dissatisfaction, reinforcing their role as optional yet highly impactful elements for emotional engagement.

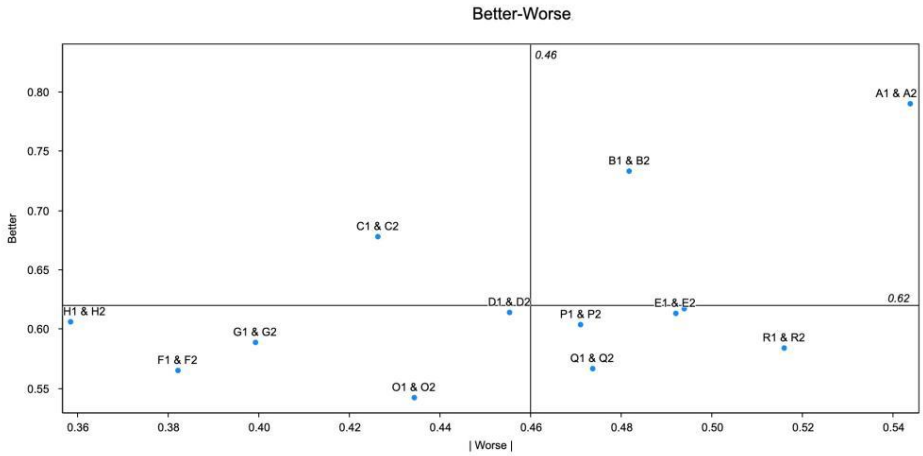

Fig. 5: Better-Worse
(Source: developed by the author)

In contrast, D1 & D2 (navigation ease) and Q1 & Q2 (payment security) demonstrate low Better coefficients but high Worse coefficients, classifying them as Basic attributes. These features represent essential user expectations, and their absence leads to a substantial decrease in satisfaction. For instance, navigation ease ensures usability, while payment security builds trust—foundational for providing a reliable user experience. Meanwhile, features like G1 & G2 (impulse buying behavior) are categorized as Performance attributes, exhibiting both high Better and moderate Worse coefficients. These attributes have a direct influence on satisfaction; their presence enhances user experience significantly, while their absence negatively impacts it, emphasizing their dual role in meeting functional and emotional needs.

The findings highlight the dual importance of UX elements in optimizing user experience. Basic attributes, such as navigation ease and payment security, should be prioritized for stability to prevent dissatisfaction and ensure platform reliability. At the same time, Attractive attributes like visual aesthetics and personalized recommendations should be innovatively enhanced to foster emotional engagement and competitive differentiation. Performance attributes, which directly influence satisfaction, offer opportunities for incremental improvements in both functional reliability and emotional resonance. This analysis underscores the need for a balanced UX strategy that stabilizes essential features while leveraging emotional drivers to maximize user engagement and satisfaction. These insights align with the study's objective of examining how emotion-driven UX design influences impulse buying behavior, providing actionable directions for e-commerce platforms to achieve sustained user loyalty and business growth. These findings suggest that platforms prioritizing visual aesthetics and personalized recommendations will be more effective in driving impulse purchases.

5.0 Discussion

This study validates the connection between emotion-driven UX design and impulse buying behavior, focusing on middle-aged women. It highlights the impact of visual aesthetics, personalized recommendations, and social interaction in fostering emotional engagement, bridging gaps in research on middle-aged consumer behavior. These findings also expand the application of emotion-driven UX principles to other digital environments, such as educational platforms prioritizing engagement or healthcare applications requiring trust and clarity.

Visual aesthetics play a fundamental role in creating emotionally appealing shopping environments. Dynamic visual elements like animations and cohesive layouts capture user attention, encourage unplanned purchases, and enhance user satisfaction. Personalized recommendations, driven by advanced algorithms, tailor product suggestions to individual preferences, driving impulse purchases and fostering long-term customer relationships. The use of artificial intelligence refines recommendation accuracy and ensures emotional resonance with users. Social interaction features, such as live chat, user reviews, and sharing tools, foster community and strengthen brand loyalty. Beyond middle-aged women, emotion-driven UX principles can address diverse demographics, with gamification appealing to younger users and simplicity benefiting older consumers. Developing inclusive UX frameworks ensures broader appeal and engagement.

By aligning UX design with consumers' emotional needs, e-commerce platforms can enhance user satisfaction, drive sales, and improve competitiveness. Addressing emotional engagement also builds customer loyalty, ensuring sustained growth and differentiation in a competitive market. However, this study is limited to women aged 50–59 and online fashion shopping, which may restrict generalizability to other groups and product categories. Self-reported data may introduce biases. Future research should explore diverse demographics, product categories, and the long-term effects of emotional UX on loyalty. Emerging technologies like VR and AI offer promising avenues for enhancing user engagement.

6.0 Conclusion & Recommendations

This study validates the link between emotion-driven UX design and impulse buying behavior in middle-aged women, highlighting the roles of visual aesthetics, personalized recommendations, and social interaction in fostering emotional engagement. It addresses gaps in research and provides a framework for UX optimization applicable to e-commerce and other digital platforms.

Practical strategies include incorporating dynamic visual elements like animations and customizable themes to enhance engagement and appeal to aesthetic preferences. Refining personalized recommendations with AI-driven algorithms can improve relevance and create emotionally resonant shopping experiences. E-commerce platforms should integrate real-time sentiment analysis to refine recommendation algorithms based on user emotions, allowing for adaptive product suggestions that align with users' emotional states. Additionally, interactive shopping experiences such as AR-powered try-on features can enhance engagement for middle-aged consumers by providing immersive and personalized shopping environments, reducing uncertainty, and encouraging purchase decisions.

Interactive features such as user-generated content, reviews, and live chat can foster social connections and encourage impulsive purchases, while seamless navigation, secure payment, and clear policies build trust and ensure reliability. Narrative-driven elements like product stories can deepen emotional engagement and platform loyalty.

Balancing functional reliability with emotional resonance optimizes user experience, enhances satisfaction, and supports long-term business growth. By integrating emerging technologies and refining UX strategies based on real-time emotional insights, e-commerce platforms can create more impactful, engaging, and competitive digital experiences.

6.1 Limitation of Research

This study has several limitations. The sample was restricted to women aged 50–59, limiting generalizability to other demographics, such as younger consumers and male shoppers. Its focus on online fashion shopping may not fully capture impulse buying behavior in other product categories where motivations differ. The reliance on self-reported data introduces potential biases, including social desirability and recall bias. Additionally, cultural differences may influence UX perception and emotional engagement, requiring cross-cultural validation. Platform design variations, such as differences between short-video-driven platforms like TikTok and traditional e-commerce sites, may also impact impulse buying behavior in ways not addressed. Despite these limitations, this study provides valuable insights into an underserved demographic and lays a foundation for further comparative research.

6.2 Suggestions for Future Research

Future research should explore emotion-driven UX design across diverse demographics, including varying age groups, cultural backgrounds, and male consumers, to improve generalizability. Examining its impact across different product categories, such as electronics and home goods, would provide a more comprehensive understanding of impulse buying behavior. Longitudinal studies are needed to assess the lasting effects of emotional UX elements on customer loyalty and retention. Additionally, integrating emerging technologies like virtual reality (VR) and artificial intelligence (AI) could offer new insights into user engagement and emotional connections in digital environments, further advancing UX-driven consumer research.

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Paper Contribution to Related Field of Study

This paper contributes to emotion-driven UX design and consumer behavior by focusing on the underrepresented middle-aged female demographic in e-commerce. Using the Kano model, it categorizes UX features and their impact on impulse buying, providing a framework for analyzing user satisfaction. The findings offer practical insights for designing inclusive and emotionally engaging e-commerce platforms, benefiting both researchers and practitioners.

References

Anoop, T. S., & Rahman, Z. (2024). From urge to action: The hidden forces behind online impulse buying in electronic commerce—a meta analytic structural equation modelling (MASEM) research. Electronic Commerce Research. https://doi.org/10.1007/s10660-024-09945-z

Chen, J. V., Ha, Q.-A., & Vu, M. T. (2022). The influences of virtual reality shopping characteristics on consumers' impulse buying behavior. International Journal of Human–Computer Interaction, 39(17), 1–19. https://doi.org/10.1080/10447318.2022.2098566

Dey, D. K., & Srivastava, A. (2017). Impulse buying intentions of young consumers from a hedonic shopping perspective. Journal of Indian Business Research, 9(4), 266–282. https://doi.org/10.1108/jibr-02-2017-0018

Eisend, M. (2022). Older people in advertising. Journal of Advertising, 51(3), 1–15. https://doi.org/10.1080/00913367.2022.2027300

Guido, G., Ugolini, M. M., & Sestino, A. (2022). Active ageing of elderly consumers: Insights and opportunities for future business strategies. SN Business & Economics, 2(1). https://doi.org/10.1007/s43546-021-00180-4

Herabadi, A. G., Verplanken, B., & van Knippenberg, A. (2009). Consumption experience of impulse buying in Indonesia: Emotional arousal and hedonistic considerations. Asian Journal of Social Psychology, 12(1), 20–31. https://doi.org/10.1111/j.1467-839x.2008.01266.x

Ingaldi, M., & Ulewicz, R. (2019). How to make e-commerce more successful by use of Kano's model to assess customer satisfaction in terms of sustainable development. Sustainability, 11(18), 4830. https://doi.org/10.3390/su11184830

Iyer, G. R., Blut, M., Xiao, S. H., & Grewal, D. (2019). Impulse buying: A meta-analytic review. Journal of the Academy of Marketing Science, 48(48), 384–404. https://doi.org/10.1007/s11747-019-00670-w

Li, Y., Liu, Q., & Wang, Y. (2022). The research on the usage behavior of TikTok short video platform in the elderly group. Journal of Education, Humanities and Social Sciences, 5, 189–197. https://doi.org/10.54097/ehss.v5i.2901

Nikolinakou, A., Phua, J., & Kwon, E. S. (2024). What drives addiction on social media sites? The relationships between psychological well-being states, social media addiction, brand addiction and impulse buying on social media. Computers in Human Behavior, 153(153), 108086. https://doi.org/10.1016/j.chb.2023.108086

Peng, Q. (2023). Empowering women in consumerism: Insights on consumption behavior and motivations in the age of online media. Journal of Education, Humanities and Social Sciences, 23, 927–931. https://doi.org/10.54097/ehss.v23i.15086

Rejón-Guardia, F. (2024). The influence of aesthetics and emotions on reuse intention and compulsive behavior in food delivery usage. British Food Journal, 126(13), 353–377. https://doi.org/10.1108/bfj-03-2024-0222

Rook, D. W., & Fisher, R. J. (1995). Normative influences on impulsive buying behavior. Journal of Consumer Research, 22(3), 305–313. https://doi.org/10.1086/209452

Sun, Z., Fu, S., & Jiang, T. (2022). Gain-framed product descriptions are more appealing to elderly consumers in live streaming e-commerce: Implications from a controlled experiment. Data and Information Management, 100022. https://doi.org/10.1016/j.dim.2022.100022

Twigg, J. (2018). Fashion, the media and age: How women's magazines use fashion to negotiate age identities. European Journal of Cultural Studies, 21(3), 334–348. https://doi.org/10.1177/1367549417708432

Wu, I.-L., Chen, K.-W., & Chiu, M.-L. (2016). Defining key drivers of online impulse purchasing: A perspective of both impulse shoppers and system users. International Journal of Information Management, 36(3), 284–296. https://doi.org/10.1016/j.ijinfomgt.2015.11.015

Xu, Q., Jiao, R. J., Yang, X., Helander, M., Khalid, H. M., & Opperud, A. (2009). An analytical Kano model for customer need analysis. Design Studies, 30(1), 87–110. https://doi.org/10.1016/j.destud.2008.07.001

Yoesoep Edhie Rachmad. (2024). Transforming digital consumers: The power of viral diffusion in consumer behavior. PT. Sonpedia Publishing Indonesia.

Zhang, X., & Zhang, S. (2024). Investigating impulse purchases in live streaming e-commerce: A perspective of match-ups. Technological Forecasting and Social Change, 205, 123513. https://doi.org/10.1016/j.techfore.2024.123513