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

Chen Yingyi[1], Rosita Mohd Tajuddin[1], Amer Shakir Zainol[1], Chen Zijie[2]

[1] College of Creative Arts, Universiti Teknologi Mara (UiTM), Malaysia, [2] College of Art and Design, Guangzhou City Construction College, China

2022627484@isiswa.uitm.edu.my, rositatajuddin@uitm.edu.my, amers781@uitm.edu.my,huang87956673@163.com
Tel : 60112637797

Abstract

This study explores the influence of emotion-driven UX design on impulse buying behavior among middle-aged women (50-59) in online fashion shopping. Using the Kano model, it categorizes UX elements—visual appeal, personalized recommendations, and social interaction—into basic, performance, and attractive needs. Findings from a survey of 265 participants show that emotionally engaging features, especially visual aesthetics and personalization, significantly drive impulse purchases, although their effect on loyalty is limited. The study provides practical insights for optimizing UX design to enhance engagement and purchasing behavior in e-commerce platforms, with implications for future research.

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

DOI: https://doi.org/10.21834/jabs.v10iSI30.459

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.

In recent years, with the rise of social media and mobile platforms, an increasing number of female consumers, especially middle-aged women, are turning to digital platforms for shopping. Research has shown that emotion-driven design elements, particularly in digital shopping experiences, can significantly evoke emotional responses from consumers and drive impulse buying behavior. This phenomenon is not only evident among younger consumers but is also emerging within the middle-aged female demographic. These consumers place greater importance on emotional connection and personalized experiences, preferring content that resonates emotionally with them. Therefore, understanding how middle-aged women respond to emotional factors in UX design is crucial for optimizing e-commerce platforms and improving user loyalty.

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 (Iyer et al., 2019). 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.

Middle-aged female consumers often exhibit distinct behavioral patterns, shaped by a combination of life experiences, emotional maturity, and evolving lifestyle priorities (Peng, 2023). Unlike younger users who may respond more readily to novelty and trend-driven content, mature women tend to value emotional resonance, authenticity, and relevance in their interactions with digital platforms. Emotion-driven UX, when thoughtfully tailored, can create a sense of connection and presence that stimulates affective responses, ultimately leading to spontaneous purchase behavior (Guido et al., 2022). By integrating personalization, aesthetic appeal, and social features into digital shopping environments, designers can better address the nuanced needs of this segment. This study thus contributes to the growing discourse on inclusive UX by emphasizing the importance of age-responsive emotional design strategies.

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). At this life stage, they prioritize genuine products that align with their values over trends. As they transition to digital shopping, their motivation centers on emotional connection and long-term value rather than novelty or instant gratification. They engage more with platforms that

provide clear, transparent, and trustworthy content, including brand values and product authenticity (Twigg, 2018).

While increasingly active on social media platforms, middle-aged women often find that current UX designs do not cater to their specific needs (Peng, 2023). They appreciate visually appealing interfaces and personalized recommendations but also seek simplicity, trust, and clear communication. Unlike younger audiences, who may respond to fast-paced content and novelty, middle-aged women look for reassurance through product descriptions, customer reviews, and ethical practices. These factors help build emotional resonance and trust, which are critical to their decision-making process (Twigg, 2018; Zhang & Zhang, 2024). Moreover, these demographic favors platforms that provide a sense of community. They respond well to social proof, such as user reviews and community interaction, which offer security and reassurance. Additionally, middle-aged women tend to prioritize practical, durable products, such as timeless fashion, that fit into their lifestyle. Personalized recommendations that consider their life stage, preferences, and health needs can significantly enhance their shopping experience (Peng, 2023).

Addressing these gaps is essential for creating inclusive and effective UX strategies tailored to middle-aged women. E-commerce platforms should focus on transparency, trust-building features, and personalized experiences. Incorporating community-building elements and clear communication about brand values will foster stronger emotional connections and ultimately lead to greater user satisfaction and loyalty.

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 (Wu et al., 2016; Chen et al., 2022). 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.

Middle-aged women represent a powerful consumer group with growing digital presence and purchasing power, especially on mobile social platforms (Li et al., 2022). Their impulse buying behaviors are often shaped not only by momentary emotional arousal but also by deeper psychological needs such as self-care, identity affirmation, and social belonging. Emotional engagement strategies that foster a sense of presence, empathy, and relevance—such as personalized content or storytelling-based marketing—may effectively stimulate spontaneous purchase intentions (Guido et al., 2022). Furthermore, the integration of peer interactions and real-time feedback in digital interfaces can heighten emotional involvement, increasing the likelihood of unplanned buying. By examining these factors, this study contributes to a more inclusive understanding of consumer psychology and provides insights into how digital environments can be adapted to the emotional and behavioral patterns of middle-aged female users.

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 Data Collection

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.

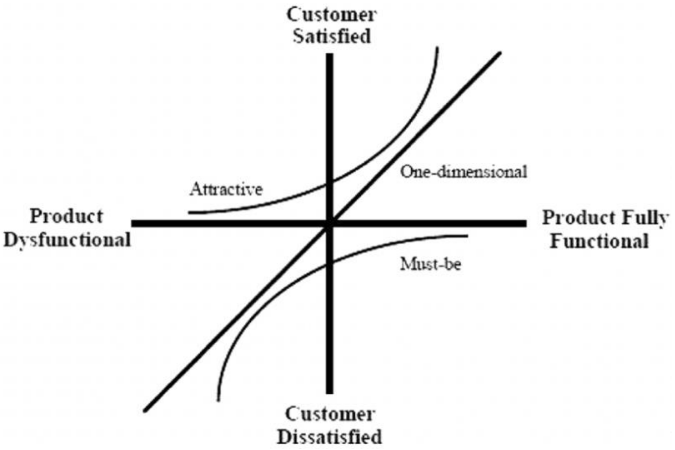

Figure 1: Kano model
(Source: Ingaldi & Ulewicz, 2019)

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)

Figure 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%）

Figure 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 Results

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

Figure 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.

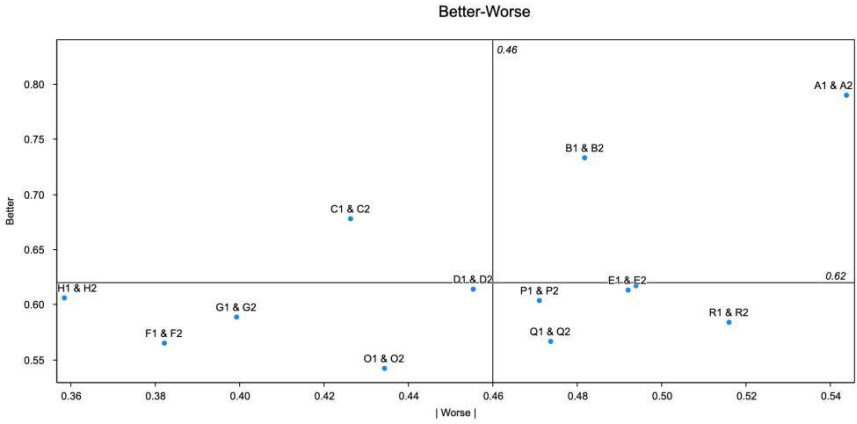

Figure 5: Better-Worse
(Source: developed by the author)

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 significant role of visual aesthetics, personalized recommendations, and social interaction in fostering emotional engagement, bridging existing gaps in research on middle-aged consumer behavior. These findings not only contribute to a deeper understanding of this demographic but also expand the application of emotion-driven UX principles to other digital environments, such as educational platforms, healthcare applications, and even offline retail experiences that prioritize engagement, trust, and clarity.

In the context of e-commerce, visual aesthetics play a fundamental role in creating emotionally appealing shopping environments. Dynamic visual elements like animations, high-quality imagery, and cohesive layouts are crucial in capturing user attention and encouraging impulse purchases. These features make the online shopping experience more immersive, appealing to consumers' emotional triggers and enhancing their satisfaction. For middle-aged women, who often seek reassurance and clarity, these visual elements can significantly reduce shopping anxiety and foster trust. Personalized recommendations, driven by advanced algorithms, tailor product suggestions to individual preferences and needs, which not only increases the likelihood of impulse buying but also fosters long-term customer relationships. The precision of recommendation systems can be refined using artificial intelligence (AI), ensuring they resonate emotionally with users by factoring in both transactional history and personal preferences.

Social interaction features such as live chat, user reviews, and social sharing tools further contribute to a positive user experience. These elements build community, enhance transparency, and strengthen brand loyalty by allowing consumers to engage with each

other and the brand in a meaningful way. This is especially important for middle-aged women who tend to prioritize trust and community, making them more likely to form emotional connections with platforms that provide these features. Beyond middle-aged women, emotion-driven UX principles can be applied to various demographic groups. For example, gamification features may appeal to younger consumers, who are often more motivated by rewards and interactive experiences. Conversely, simplicity in design and clear navigation would benefit older users, including senior citizens who may prioritize ease of use and accessibility. By developing inclusive UX frameworks that address the emotional and functional needs of a diverse consumer base, e-commerce platforms can maximize their reach and engagement.

Aligning UX design with consumers' emotional needs is essential not only for improving user satisfaction but also for driving sales and boosting competitiveness in the marketplace. A platform that fosters emotional engagement not only enhances the user experience but also builds customer loyalty, ensuring sustained growth and differentiation in a crowded digital marketplace. However, this study's focus on women aged 50–59 and online fashion shopping may limit the generalizability of its findings to other demographics or product categories. While the study sheds light on the emotional engagement factors relevant to middle-aged female consumers, further research is needed to explore other age groups, consumer segments, and product types to see how these findings can be applied more broadly. Additionally, self-reported data may introduce biases, and future studies should look to incorporate diverse data sources, including behavioral data and longitudinal studies, to provide a more comprehensive understanding of emotional UX in consumer behavior.

Emerging technologies, such as virtual reality (VR) and artificial intelligence (AI), hold promising potential for enhancing user engagement in e-commerce platforms. VR can provide immersive shopping experiences, allowing users to interact with products in a more emotionally engaging and realistic way. AI, on the other hand, can refine personalization further by predicting users' preferences and adapting the shopping experience in real-time. Future research should explore the integration of these technologies into UX design to see how they can further strengthen emotional connections and drive impulse purchases, particularly in diverse and evolving digital environments.

6.0 Conclusion

This study validates the link between emotion-driven user experience (UX) design and impulse buying behavior among middle-aged women, offering key insights into how digital interfaces shape consumer decisions. It emphasizes the significance of visual aesthetics, personalized recommendations, and social interaction in fostering emotional engagement that drives unplanned purchases. Addressing notable gaps in current literature, this research highlights an often-overlooked demographic—women aged 50 to 59—and presents a comprehensive framework for UX optimization applicable across e-commerce, educational apps, healthcare platforms, and even offline retail environments. These

platforms must evolve by better aligning UX strategies with the emotional needs and lifestyle preferences of diverse consumer segments.

Practical strategies for UX optimization should include dynamic and emotionally appealing design features. This involves using high-resolution imagery, subtle animations, and customizable themes to create engaging, user-friendly interfaces. Such features effectively capture the attention of middle-aged women, who value clarity and emotional resonance in their shopping experience.

In addition, enhancing personalization through AI-powered algorithms improves the emotional relevance of recommendations. By analyzing shopping history, browsing behavior, and inferred emotional states, AI can offer tailored suggestions that feel more intuitive and satisfying. These emotionally resonant experiences reinforce brand attachment and foster loyalty.Integrating real-time sentiment analysis into UX design further enhances emotional responsiveness. Platforms can adapt content—such as messaging tone or visual layout—based on user sentiment, leading to more emotionally intelligent interactions and higher satisfaction.Immersive technologies like augmented reality (AR) can reduce purchase uncertainty. AR-powered virtual try-on features simulate real-life experiences, increasing confidence and supporting impulsive buying decisions among users who prefer tactile cues before committing to a purchase.Social features such as user-generated content, reviews, and live chat support are also vital. These functions help foster community and provide social validation, which is especially important for middle-aged consumers. Creating spaces for sharing experiences and interacting with others can deepen emotional connections with the platform.Furthermore, seamless navigation, secure payment systems, and transparent return policies improve trust and reliability. Storytelling—such as product narratives and brand missions—enhances emotional engagement, giving products context and meaning that resonate with users on a personal level.Balancing functionality and emotional resonance is essential. Platforms that integrate usability with emotional depth can boost engagement, satisfaction, and business growth. As digital competition intensifies, leveraging emotional data and emerging technologies will be crucial for differentiation.

However, this study has several limitations. The sample is restricted to women aged 50–59, limiting generalizability to other groups such as younger users and male consumers. The focus on fashion-related impulse buying may not fully capture behaviors across other categories like electronics or household goods. The use of self-reported data may introduce bias, and cultural factors influencing UX perception remain unexplored. Platform design differences, such as those between TikTok and traditional e-commerce, may also affect user behavior in ways not addressed here.

Future research should examine emotion-driven UX across a broader range of demographics, product categories, and cultural contexts. Longitudinal studies are needed to assess the sustained impact of emotional UX design on loyalty and engagement. Incorporating emerging technologies like virtual reality (VR) and emotion AI will further advance understanding of emotional connections in digital environments.

Article 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.

Acknowledgement 1

The authors sincerely thank the College of Creative Arts, Universiti Teknologi Mara (UiTM) for its academic support and resources. I also appreciate the Ministry of Higher Education Malaysia for its support.

Acknowledgement 2

The authors would like to express their sincere gratitude to the organisers of AicQoL2025, Pangkor, Malaysia, for the opportunity to present this paper. This work is published in the Environment-Behaviour Proceedings Journal, Vol. 20 (January 2025). Available at: https://ebpj.e-iph.co.uk/index.php/EBProceedings/issue/view/71

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