



**THE SENTIMENT OF TECHNOLOGY: AN
EXPLORATORY STUDY ON HOW WEARABLE
TECHNOLOGY OF OUTDOOR SPORTS BRANDS
BUILDS EMOTIONAL ATTACHMENT BEYOND
FUNCTIONALITY FOR THE UK GENERATION Z
FEMALE CONSUMER.**

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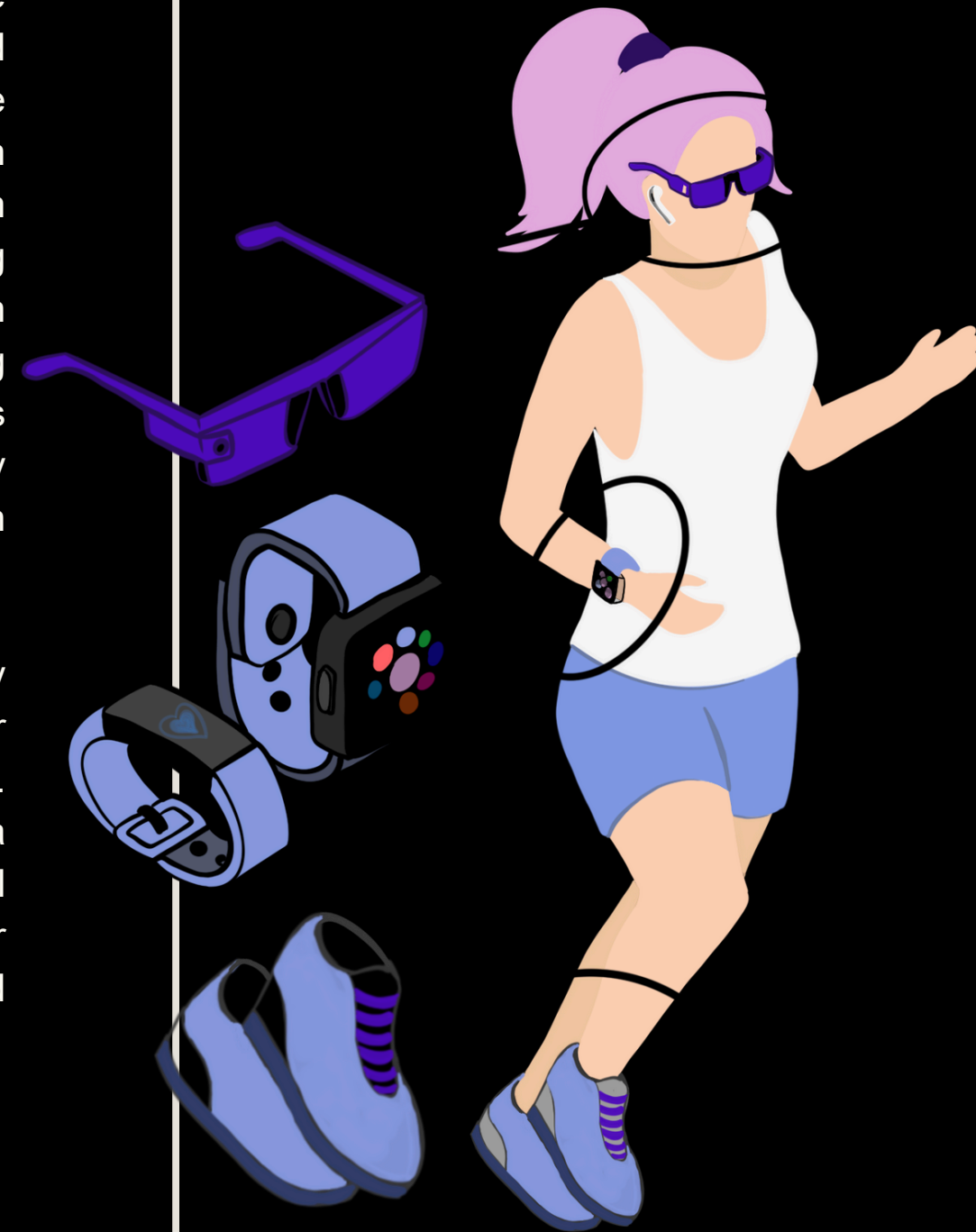
ABSTRACT

With the widespread adoption of wearable technology in outdoor sports, research on its functionalities and general user behavior has increased. Simultaneously, female Gen Z consumers in the UK, a significant consumer group, are showing growing interest in wearable technology. However, an increasing number of consumers are no longer satisfied with basic product features, instead seeking deeper emotional connections and value. Research exploring female consumers' emotional experiences and personalized needs remains scarce, with this aspect not explicitly addressed in existing wearable device studies. Therefore, this study aims to fill this gap, revealing how wearable technology can foster emotional attachment with this user group through emotional design and personalization strategies, enhancing their experience with brand products and relationships with consumers. This study critically reviews existing research on wearable technology, emotional attachment, and consumer relationships within the outdoor sports sector, examining how outdoor sports fashion brands build emotional connections beyond functionality through wearable technology. This research adopted an interpretivism philosophy and employed qualitative research methods, drawing on the Technology Acceptance Model (TAM) and emotional design frameworks. Semi-structured interviews were conducted with 11 British Generation Z female consumers, and the data were coded and analysis through thematic analysis.

Research results show that female Gen Z consumers in the UK are highly receptive to wearable devices, particularly appearance design, compatibility, and practical functionality. The research findings indicate that the demand for wearable devices among this group primarily falls into two categories: device-related features and emotional needs. This study is the first to integrate TAM with emotional design theory across multiple disciplines, applying it to a neglected consumer group, British Generation Z female consumer. The study proposes a new specific conceptual framework for emotional attachment, and the findings provide practical design and management recommendations for outdoor sports brands, promoting the development of wearable technology towards a more humane, inclusive, and emotionally engaging experience.

Key words:

Outdoor sports, Wearable technology, Emotional attachment, Generation Z female, British female, Emotional design, Technology Acceptance Model



RESEARCH QUESTION:

IN WHAT WAYS DOES WEARABLE TECHNOLOGY FOSTER EMOTIONAL ATTACHMENT WITH UK GEN Z FEMALE CONSUMERS IN THE OUTDOOR SPORTSWEAR SECTOR?

Aim:

To investigate how wearable technology is used by outdoor sports brands to build emotional attachment with UK Gen Z female consumers, in order to generate strategic insights for design, innovation, and brand management.

Objectives:

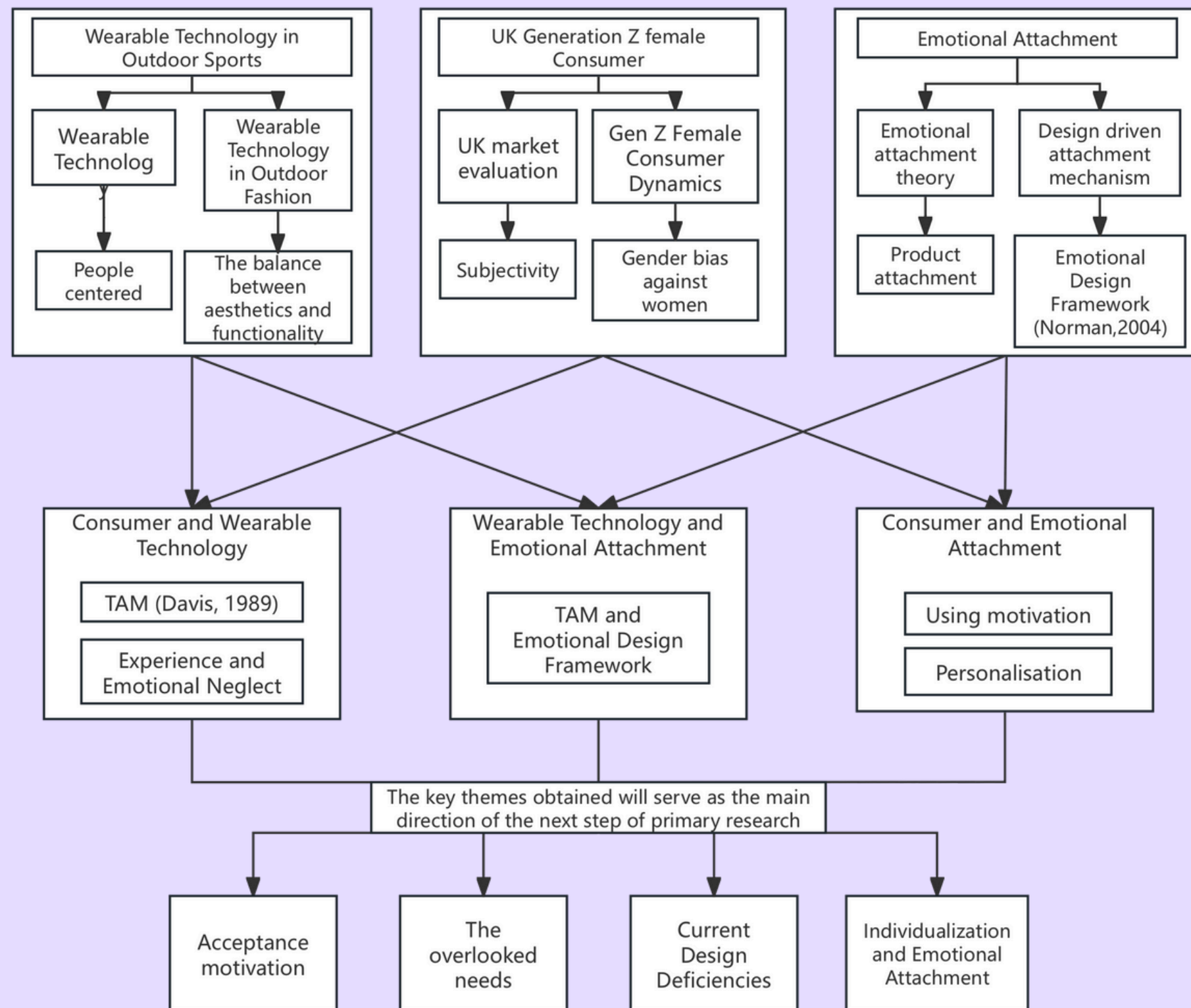
- 1** To conduct literature review concerning outdoor fashion wearable technology, Emotional Design Model, Technology Acceptance Model (TAM) , and UK Gen-Z female consumer, in order to establish a theoretical foundation integrating these fields, and a comprehensive understanding of wearable technology in outdoor sports.
- 2** To explore the attitudes of UK Gen-Z female consumers towards the current functional attributes offered by outdoor sports brands as well as their acceptance of wearable technology in order to pinpoint their long term emotional attachment.
- 3** To probe how personalisation feature in wearable technology facilitate emotional attachment between UK Gen-Z female consumers and outdoor sports brands, revealing challenges and opportunities in this practice.
- 4** To develop strategic recommendations for outdoor sports brands on how to align wearable technology with emotional engagement strategies, product development, and customer experience.



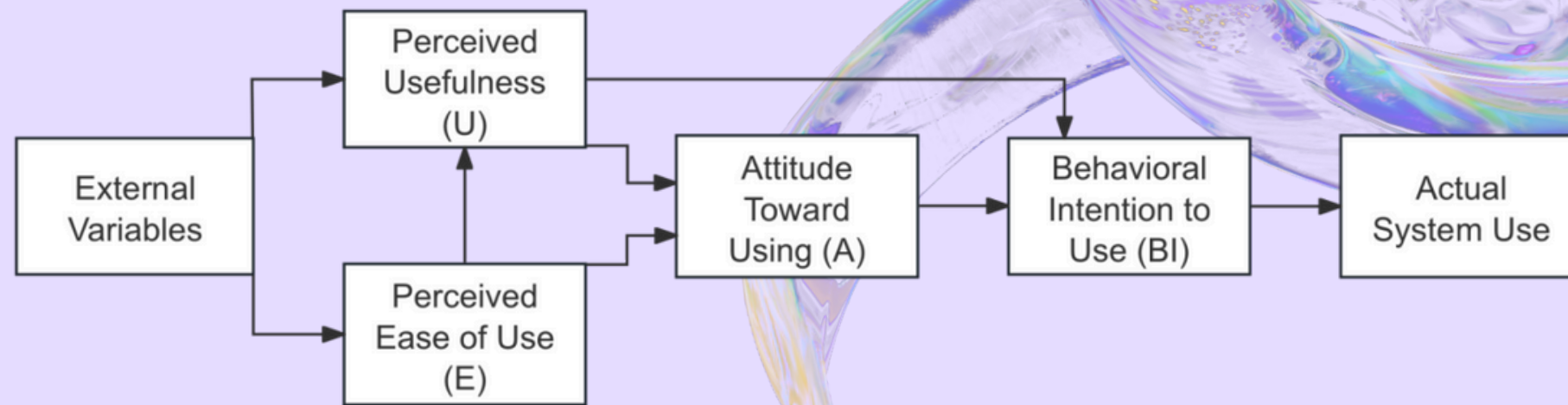
LITERATURE REVIEW

Objectives 1

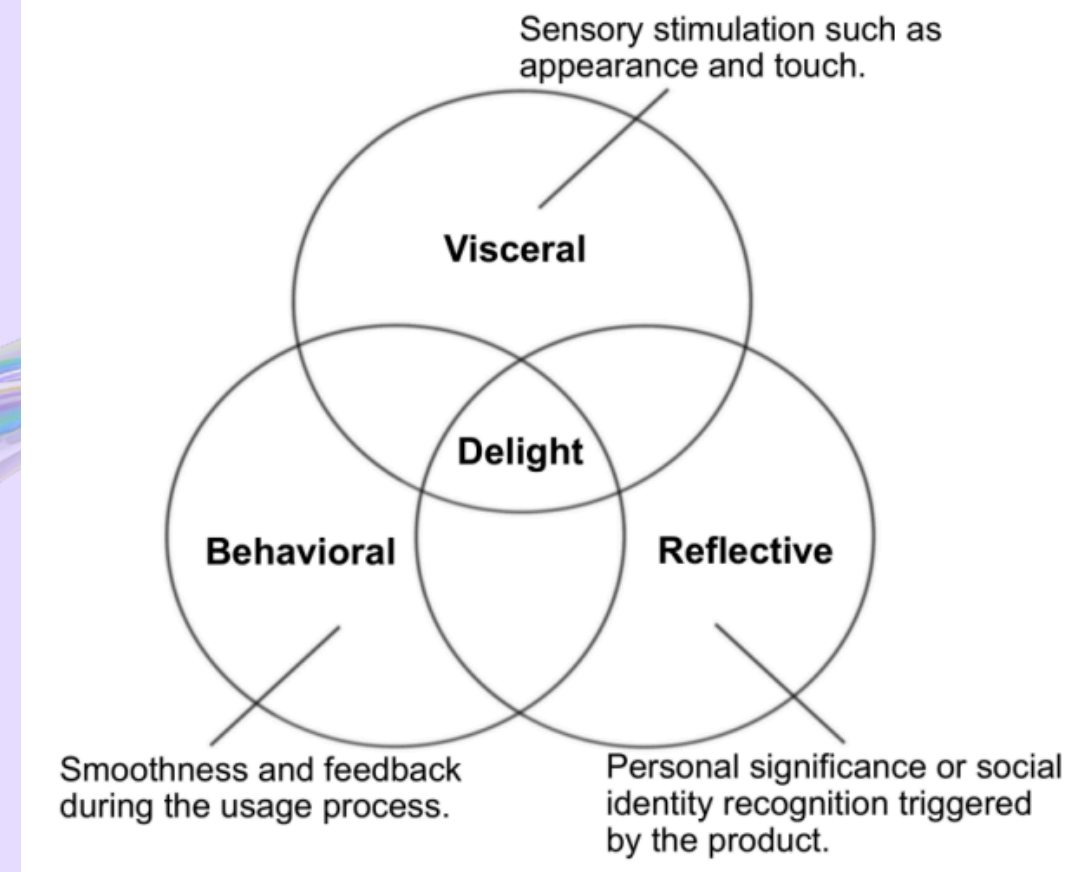
Literature Review Visual Map



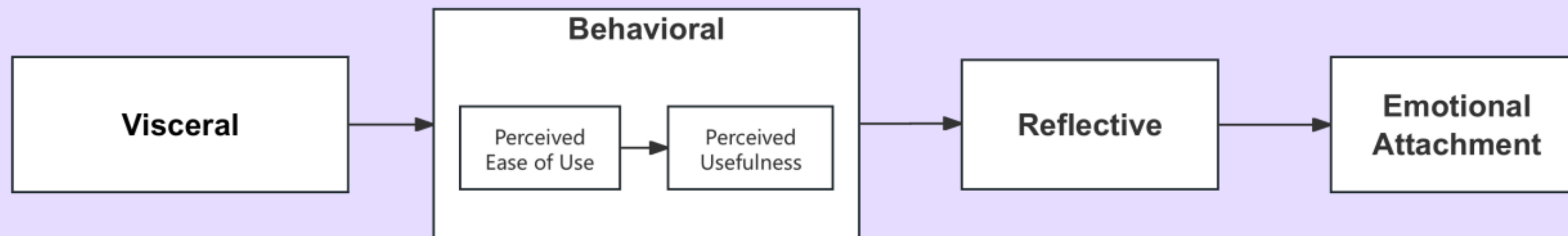
Literature Review Visual Map (Author's own)



Technology Acceptance Model (TAM) (Author's own, Adapted from Davis, 1989)

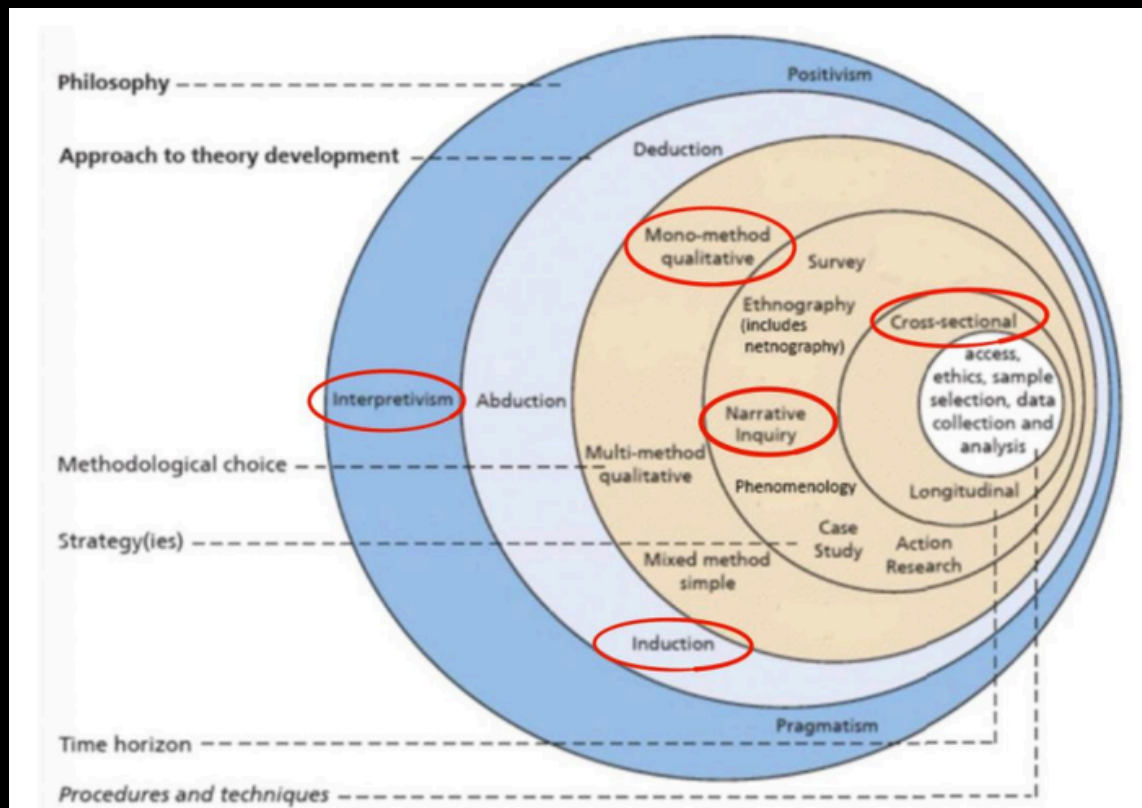


Emotional Design Framework (Author's own, Adapted from Norman, 2004)

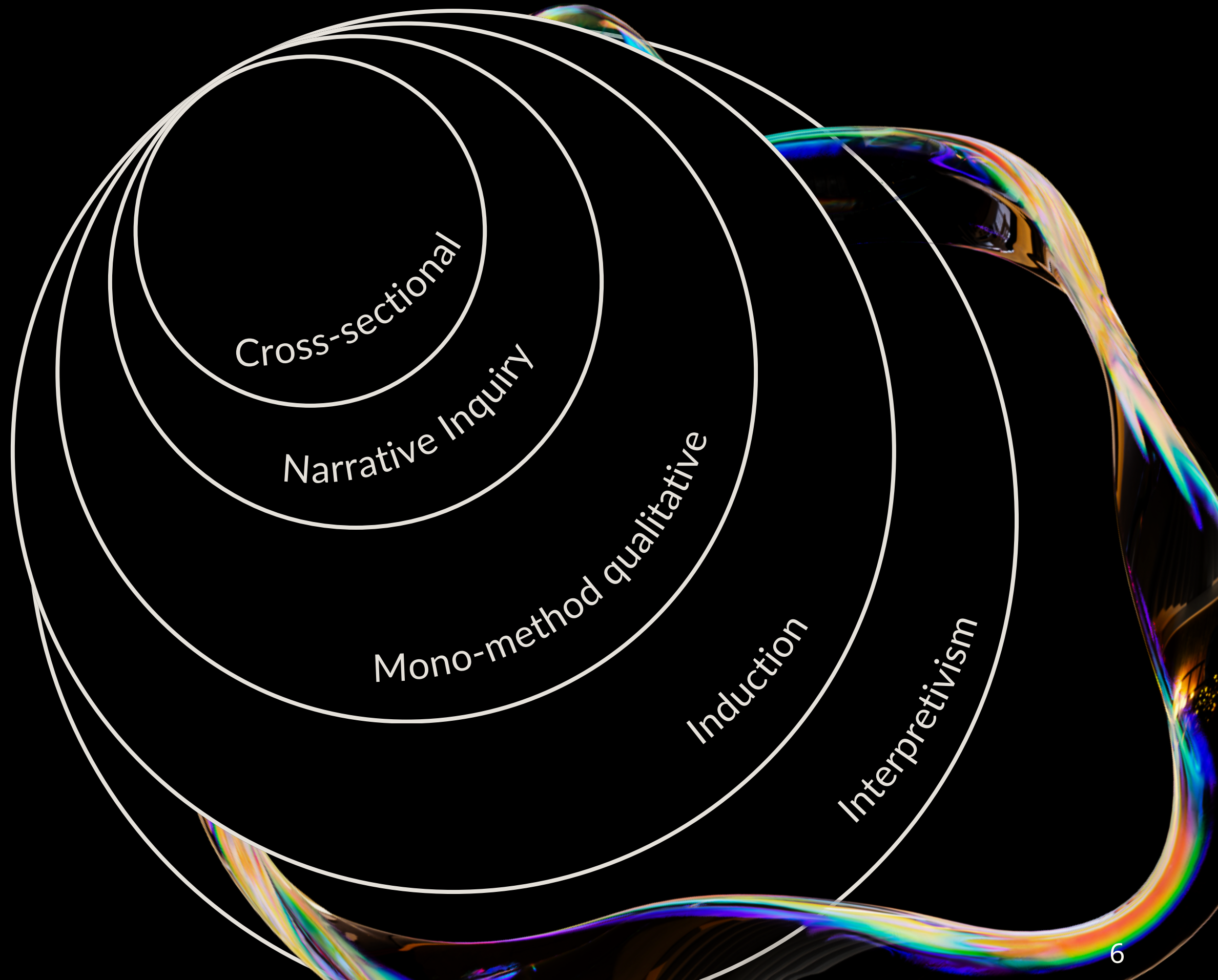


Integration of TAM and Emotional Design Framework (Author's own, Adapted from Davis, 1989; Norman, 2004)

RESEARCH DESIGN



Research Questions (Author's own, Adapted from Saunders et al., 2023)



RESEARCH METHOD

This study adopted purposive sampling, conducted one-on-one semi-structured interviews with 11 eligible participants, and analyzed the obtained data using thematic analysis.

Data collection strictly adhered to the UAL Code of Practice on Research Ethics (2020), and was conducted after the Research Ethics Approval Form and Consent Form had been signed.

Participant Summary Table

Participant Number	Age	Gender	Location	Types of Wearable Technology Used	Number of Used Wearable	Types of outdoor sports
Participant (P1)	23	Female	Live in London	Watch, Ring	Two	Outdoor running
Participant (P2)	24	Female	Live in London	Watch, Glasses	More than two	Cycling, Outdoor running
Participant (P3)	25	Female	Live in Edinburgh	Watch	Two	Hiking, Outdoor running
Participant (P4)	20	Female	Live in Southampton	Watch	One	Cycling, Outdoor running
Participant (P5)	23	Female	Live in London	Watch, Headphones	Two	Outdoor running, Climbing
Participant (P6)	24	Female	Live in London	Watch	One	Long distance running, Cycling
Participant (P7)	26	Female	Live in London	Watch	One	Hiking, Outdoor running, Cycling
Participant (P8)	21	Female	Live in London	Watch, Wearable camera	Two	Hiking, Climbing
Participant (P9)	26	Female	Live in Manchester	Watch	Two	Triathlon, Marathon
Participant (P10)	25	Female	Live in Sheffield	Watch, Ring	More than two	Surfing, Tennis, Outdoor running
Participant (P11)	19	Female	Live in Coventry	Watch	One	Hiking, Fast walk, Jog

Participant Summary Table (Author's own)

FINDING AND DISCUSSION

Objectives and Key Finding	
Objectives	Key Finding
<p>Objective 1: To conduct literature review concerning outdoor fashion wearable technology, Emotional Design Model, Technology Acceptance Model (TAM) , and UK Gen-Z female consumer, in order to establish a theoretical foundation integrating these fields, and a comprehensive understanding of wearable technology in outdoor sports.</p>	<p>Wearable technology for outdoor sports focuses on functionality, neglects emotions and women's needs, and still faces application and design challenges. This study constructs an integrated framework of TAM and emotional design framework.</p>
<p>Objective 2: To explore the attitudes of UK Gen-Z female consumers towards the current functional attributes offered by outdoor sports brands as well as their acceptance of wearable technology in order to pinpoint their long term emotional attachment.</p>	<p>Focus on functional usefulness, ease of use, and adaptability, and expect emotional value. This group are highly receptive to wearables and pay attention to appearance.</p>
<p>Objective 3: To probe how personalisation feature in wearable technology facilitate emotional attachment between UK Gen-Z female consumers and outdoor sports brands, revealing challenges and opportunities in this practice.</p>	<p>Personalized safety features, functional adaptability, and personalized appearance, are key factors contributing to attachment, while device quality is a major obstacle.</p>
<p>Objective 4: To develop strategic recommendations for outdoor sports brands on how to align wearable technology with emotional engagement strategies, product development, and customer experience.</p>	<p>Prioritize solving quality issues, increasing the proportion of female employees in the team, and upgrading personalized service standards.</p>

Objectives and Key Finding (Author's own)

FINDING AND DISCUSSION

Objectives 2

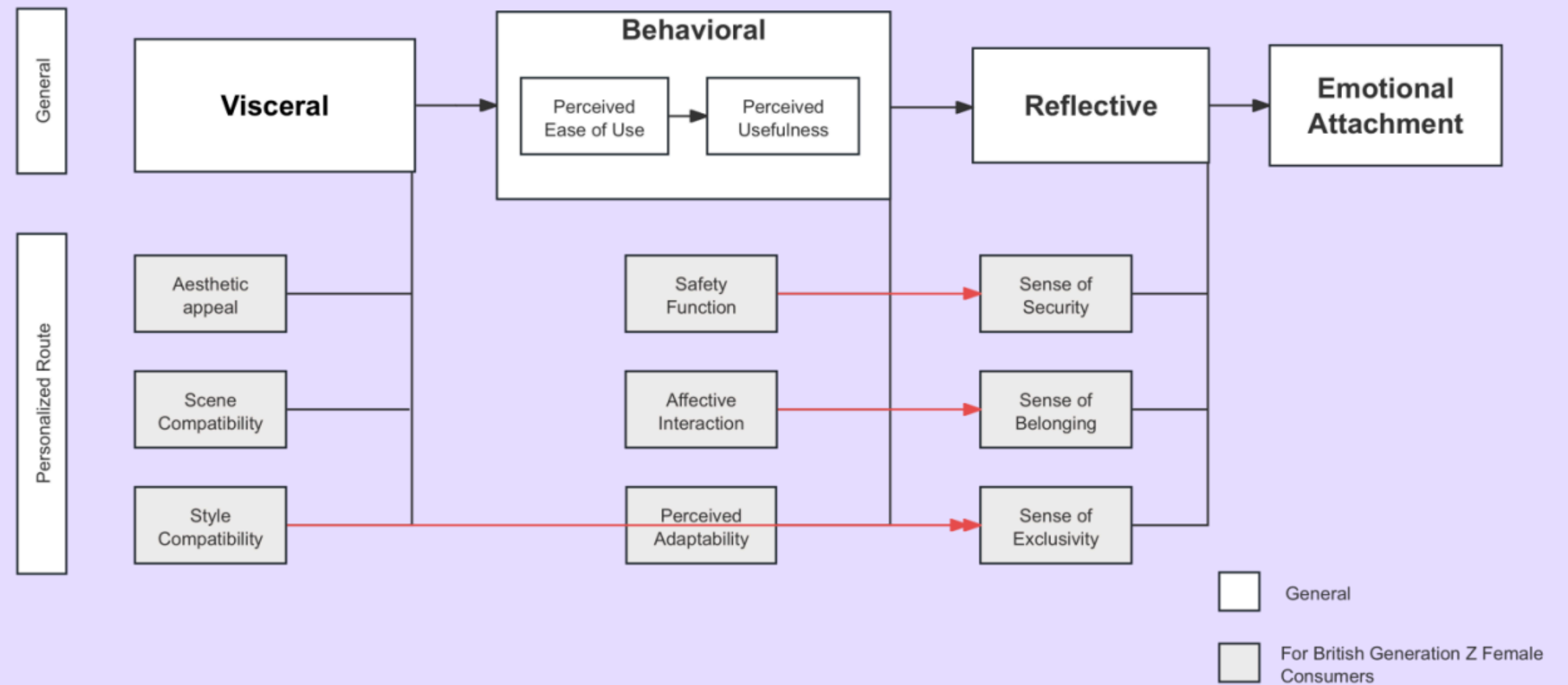
Consumer attitudes and acceptance			
	Primary Research Finding	Secondary Research Finding	Relevance to the Integration Framework
Functional attitude	-Purpose-oriented -Focus on functional usefulness	Whether a product can achieve the actual utility expected by consumers is one of the possible factors affecting the formation of attachment (Kowalski and Yoon, 2022).	Behavioral Layer
	-Focus on functional experience -Ease of use - Adaptability	TAM emphasizes the importance of focusing on perceived ease of use and perceived usefulness for technology products (Davis, 1989).	Behavioral Layer
	-Emotional value - Security	Consumers demand not only functional value but also emotional value from products (Ravi et al., 2022).	Reflective Layer
Acceptance and Impact	- High acceptance -High criticism and high expectations	Women generally exhibit a higher risk aversion toward high-tech products (Kotze et al., 2016). Generation Z are mobile internet native and early adopter of technology (Kim et al., 2022; Theocharis & Tsekouropoulos, 2025).	Behavioral Layer
	-Most concerned about appearance -Aesthetics appeal - Personal style fit - Use scenario fit	Wearables need to balance aesthetics and functionality (William, 2024). British consumers pursue consistency with their own aesthetics and embrace personal style (Sarokin and Bocken, 2024).	Visceral Layer

Consumer Attitudes and Acceptance (Author's own)

FINDING AND DISCUSSION

Objectives 3

Personalized Emotional Attachment Integration Framework



Personalized Emotional Attachment Integration Framework (Author's own, Adapted from Davis, 1989; Norman, 2004)

MANAGERIAL IMPLICATIONS AND VIABLE RECOMMENDATIONS

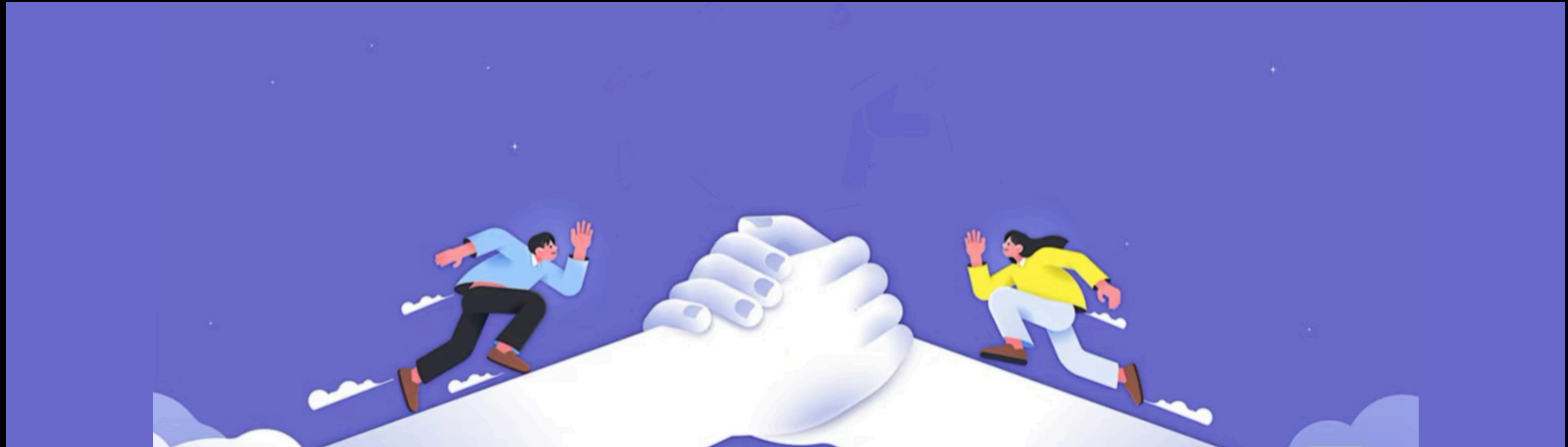


Objectives 4

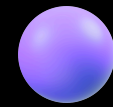
First, quality issues should be addressed. Second, compatibility issues should be addressed through immersive testing. Finally, user co-creation should be focused on enhancing the emotional connection brought about by personalization and the women's care team's exploration of women's needs. From a management design perspective, following the recommendations of this research can create wearable devices that foster long-term emotional attachment and usage with female consumers in the UK's Generation Z.

Managerial Implications	Strategy Recommendations	Viable Recommendations	Priority
<ul style="list-style-type: none"> · Reverse the design form to focus on 'wearability' rather than 'technological devices' and enhance adaptability. · Move beyond male-centric design, integrating female-friendly adaptability to enhance user experience. · The emphasis is on equipment reliability rather than on diverse functionality. 	<ul style="list-style-type: none"> · Improve team empathy and gender parity. · Immersive female user experience and scenario driven improvement. · Realize the user co-creation ecosystem focusing on empathy and emotional connection · Manage quality issues or reshape communication, transform crises into opportunities for emotional connection. 	<ul style="list-style-type: none"> · Improve the gender parity in product development team. · The design team conduct longitudinal observation of usage scenarios, following at least 20 participants for 24 hours. · Provide users with personalized appearance and services, as well as tiered management of personal information. · Prioritize critical issues by providing fun, human communication or mobile power, before investing resources in addressing quality issues. 	<p>!</p> <p>!!</p> <p>!</p> <p>!!!</p>

CONCLUSION

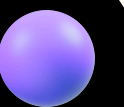


ORIGINALITY AND CONTRIBUTION




This study is the first to offer a fusion conceptual framework combining TAM and emotional design, encompassing both emotional and functional dimensions (Davis, 1989; Norman, 2004). It also applies this framework to segmented populations, further developing a personalized emotional attachment integration framework for Generation Z female consumers, specifically targeting the UK. This research reshapes existing research and is highly original and academically significant. In terms of management contribution, this study proposes management implications, strategies and feasible suggestions on how to form emotional attachment with British Gen Z female consumers, which can help the industry establish long-term emotional relationships with this group of consumers.

LIMITATION AND FURTHER RESEARCH



This study still has limitations, including a single sample size, the absence of industry recommendations, time constraints, and a failure to differentiate between device form and exercise risk. Of particular concern is the lack of incorporation of industry recommendations, which can lead to a neglect of the feasibility of design practices. Future research can draw on the perspectives of industry experts and integrate current technological, design, and business factors and capabilities to provide more realistic and actionable recommendations.

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THANK YOU

for your time and attention

by Ziqi Yang