



Exploring the Correlation between User Experience and Brand Loyalty with Fitness App

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Abstract. This study empirically validates the impact of user experience on brand identity and loyalty in online fitness apps. The results show that emotional, social, and informational experiences significantly enhance brand identity and loyalty, while sensory experience does not directly affect brand loyalty. Companies should improve users' emotional, social, and informational experiences to promote long-term brand loyalty.

Keywords: User experience; Brand loyalty; Fitness App

1 Introduction

Driven by the wave of the internet, the fitness industry is undergoing profound changes. We can now provide users with more personalized fitness guidance and real-time feedback by introducing smart devices and fitness apps. Online platforms like Keep APP have become market leaders due to their convenience, personalized services, and vital community functions. However, this has sparked lively discussions about the relationship between user experience and brand loyalty. User experience is crucial for online fitness platforms, encompassing sensory, emotional, social, and informational aspects. Whether these aspects of experience can effectively translate into brand loyalty will have a profound impact on the future development of the entire industry. Online platforms cultivate user loyalty through diverse content, social interaction, and data-driven feedback mechanisms. However, there are also voices questioning whether virtual connections can rival physical ones and concerns about potential flaws that could harm the brand image. This study explores how Keep APP enhances user experience by introducing smart devices and fitness apps and how this subsequently affects brand loyalty. It reveals the intrinsic connections between various experience dimensions, brand identity, and loyalty. Utilizing surveys and statistical analysis, we explore the contribution of user experience to brand loyalty, striving to bolster user retention and foster more profound brand devotion in the virtual fitness realm.

2 Literature Review and Development of Hypotheses

2.1 Cognition-Emotion-Behavior Theory

The "cognition-emotion-behavior" theory is crucial in internet marketing, emphasizing the interplay of users' cognitive processes, emotional reactions, and behavioral decisions. Cognitive patterns influence browsing purchase decisions ^[16]. Emotions also play a significant role ^[4]. Understanding online consumer behaviors is essential for shaping effective marketing strategies, such as personalized recommendations and interactive ads, to enhance engagement ^[14]. In applying this theory, marketers must holistically consider consumers' cognition, emotions, and behaviors to craft an optimal user experience that fosters brand loyalty.

2.2 Users' Experience and Brand Identity

UX, a dynamic and subjective concept, involves individual experiences with products, systems, or services. It encompasses sensory, emotional, social, and informational experiences. Sensory focuses on sensations like vision and touch ^[2]. Emotions relate to reactions during use ^[12]. Social concerns interaction during product use ^[15]. Information involves acquiring and understanding data ^[3]. Good APP design, smooth operations, and accurate feedback enhance brand identity ^[11]. Positive emotions like belonging deepen this identity; frustration triggers negatives ^[1]. Social functions strengthen community and brand ^[9]. Professional, personalized info boosts trust ^[6]. Based on this, we propose research hypotheses:

H1-1: Users' sensory experience has a positive impact on brand identity of online fitness Apps.

H1-2: Users' emotional experience has a positive impact on brand identity of online fitness Apps.

H1-3: Users' social experience has a positive impact on brand identity of online fitness Apps.

H1-4: Users' informational experience has a positive impact on brand identity of online fitness Apps.

2.3 Users' Experience and Brand Loyalty

A user-friendly APP interface with prompt data feedback boosts satisfaction and brand loyalty ^[11]. Optimizing sensory experience is key for online fitness APP loyalty. Positive emotions like achievement and community joy foster brand belonging and loyalty ^[13]. The community sense from social features promotes user engagement and loyalty ^[7]. Info quality, accuracy, and personalization impact trust and loyalty ^[5]. Based on this, we propose research hypotheses.

H2-1: Users' sensory experience has a positive impact on brand loyalty to online fitness Apps.

H2-2: Users' emotional experience has a positive impact on brand loyalty to online fitness Apps.

H2-3: Users' social experience has a positive impact on brand loyalty to online fitness Apps.

H2-4: Users' informational experience has a positive impact on brand loyalty to online fitness Apps.

2.4 Brand Identity and Brand Loyalty

When users develop a strong brand identity with an online fitness App, they perceive the brand aligning with their values and needs, thus increasing their preference to continue using its products or services. This sense of identity enhances user satisfaction and a sense of belonging and motivates them to actively recommend the brand to others, further expanding the brand's influence [8]. Therefore, we infer that user brand identity is critical to cultivating brand loyalty for online fitness Apps. Based on the above review, the following research hypothesis is proposed:

H3: Users' brand identity with online fitness Apps has a positive impact on brand loyalty.

3 Research Method

This survey targeted Keep users nationwide, utilizing online networks with family and friends. To ensure validity, IPs were filled out across the country^[10]. During collection, participants searched for Keep App users, distributed questionnaires, and requested forwards using a link-based approach, ensuring data authenticity. After a week, 451 valid questionnaires were collected following dedicated research and screening to remove disqualifications.

4 Data Analysis

4.1 Demographics

Regarding gender, 267 women (59.2%) and 184 men (40.8%) participated. Age-wise, 48 were under 19 (10.6%), 260 were 19-25 (57.6%), 66 were 26-30 (14.6%), 32 were 31-40 (7.1%), 28 were 41-50 (6.2%), 10 were 51-60 (2.2%), and 7 were over 60 (1.6%). Educationally, 297 had bachelor's degrees (65.9%), 122 had high school or lower (27.1%), 22 had master's (4.9%), and 10 had doctoral degrees (2.2%).

4.2 Convergent Validity and Discriminant validity

The Cronbach's Alpha of sensory experience, emotional experience, social experience, informational experience, brand identity, and brand loyalty ranges from 0.927 to 0.936, the Composite Reliability ranges from 0.894 to 0.909, and the AVE ranges from 0.761 to 0.792. All statistical indicators meet the statistical criteria for the second-stage verification. Based on the results in Table 1, the AVE values for each varia-

ble are more significant than the correlation coefficients, indicating good discriminant validity among the various variables in the scale.

$$GOF = \sqrt{AVE \times R^2} = \sqrt{0.781 \times 0.374} = 0.540$$

The result shows that the GoF of the model is 0.540, above the threshold criterion of 0.36 for a large effect size. This indicates that the Goodness of Fit is acceptable.

Table 1. Summary of convergent validity and discriminant validity results.

	Alpha	CR	AVE	BI	BL	EE	IE	SEE	SOE
BI	0.927	0.894	0.761	0.872					
BL	0.939	0.913	0.792	0.462	0.890				
EE	0.933	0.904	0.777	0.474	0.531	0.881			
IE	0.936	0.908	0.784	0.463	0.510	0.455	0.885		
SEE	0.936	0.909	0.787	0.477	0.431	0.511	0.542	0.887	
SOE	0.936	0.909	0.785	0.366	0.483	0.539	0.474	0.508	0.886

4.3 Path Analysis

In PLS, the path structures between constructs comprise the inner model. The path coefficient t-values, significance, and hypothesis testing results for the inner model are tabulated in Table 2 and illustrated in Fig. 1. The direct influence of SEE on BL (H2-1) failed to achieve significance, and thus, H2-1 was rejected. Apart from H2-1, the remaining seven hypotheses formulated in this research were supported.

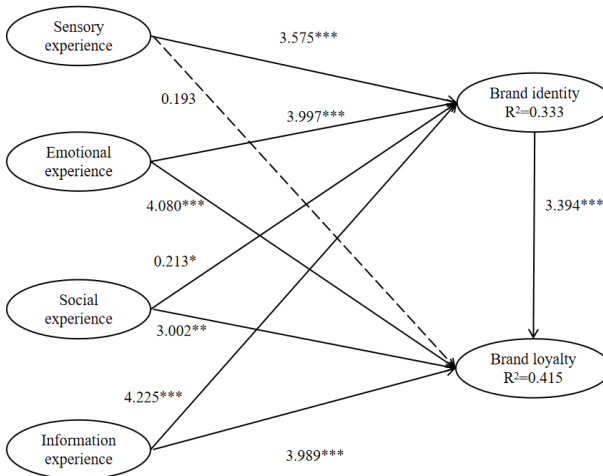


Fig. 1. Path coefficient

Table 2. Summary of hypotheses testing results.

Hypothesis	Path	Standardized path coefficient	T-value	Supported
H1-1	SEE->BI	0.222	3.575***	YES
H1-2	EE->BI	0.253	3.997***	YES
H1-3	SOE->BI	0.012	0.213*	YES
H1-4	IE->BI	0.222	4.225***	YES
H2-1	SEE->BL	0.011	0.193	NO
H2-2	EE->BL	0.246	4.080***	YES
H2-3	SOE->BL	0.172	3.002**	YES
H2-4	IE->BL	0.232	3.989***	YES
H3	BI->BL	0.170	3.394***	YES

Note1:SEE=Sensory experience; EE=Emotional experience; SOE=Social experience; IE=Informational experience; BI=Brand identity; BL=Brand loyalty

Note 2: * p-value <0.05; ** p-value < 0.01; *** p-value < 0.001.

5 Discussion

This study validates how various user experience dimensions affect brand identity and loyalty for online fitness apps, focusing on smart devices and fitness applications for personalized guidance and feedback. Results support most hypotheses, except H2-1, which states that user sensory experience positively impacts brand loyalty. Our analysis suggests that while sensory experience is important, it may not directly translate into long-term brand loyalty in a competitive app market. Instead, utility, content quality, and service support are emphasized. Emotional, social, and informational experiences significantly impact brand identity and loyalty. Thus, besides basic design, it's crucial to strengthen emotional connections, foster social interactions, and ensure accurate, personalized information. Incorporating smart devices and apps can enhance these aspects, addressing user needs and boosting brand identity and loyalty. In brief, fostering user loyalty requires enriching emotional, social, and informational experiences through personalized guidance and feedback.

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