

# Servicescape, SERVQUAL, Kano 모델을 활용한 고객 만족 및 불만족 요인 분석

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## Analyzing Factors Influencing Customer Satisfaction and Dissatisfaction: An Integrated Approach Using Servicescape, SERVQUAL, and the Kano Model

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### ABSTRACT

**Purpose:** This study investigates how servicescape and SERVQUAL factors influence customer satisfaction and dissatisfaction within the framework of the Kano model. By adopting this model, the research aims to identify *DELIGHTERS*, *SATISFIERS*, and *DISSATISFIERS* to help service providers allocate resources more effectively in a multi-service environment.

**Methods:** A survey of 131 respondents was conducted, and hierarchical regression analysis was used to test several hypotheses.

**Results:** The regression analysis revealed key findings. First, comfort and employee impression were identified as *DELIGHTERS*. These factors increase satisfaction when fulfilled, but their absence does not cause dissatisfaction. Second, reliability was confirmed as a *SATISFIER*. Its fulfillment has a linear relationship with both satisfaction and dissatisfaction. Finally, no factors were identified as *DISSATISFIERS*, meaning that none significantly increased dissatisfaction when absent.

**Conclusion:** This study integrates the servicescape and SERVQUAL models within the Kano framework to better understand drivers of customer satisfaction and dissatisfaction. The findings provide insights for service providers to deploy resources efficiently by focusing on factors that influence customer perceptions.

**Key Words:** Servicescape, SERVQUAL, Kano Model, Customer Satisfaction and Dissatisfaction

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# 1. Introduction

In the increasingly competitive service industry, service firms must enhance customer satisfaction to survive and thrive (Cronin Jr & Taylor, 1992; Dagger & Sweeney, 2006; Oliver, 1981). In particular, multi-service environments—where a variety of services are offered under one roof—face unique challenges but also present opportunities for service providers aiming to optimize service quality and customer experience (Nguyen & Nham, 2022). To address these challenges, traditional approaches such as the servicescape—which refers to the physical and sensory elements of the service environment that influence customer emotions, behaviors, and overall satisfaction—along with the widely recognized SERVQUAL framework, have garnered significant attention from both academics and practitioners (Bitner, 1992). These frameworks serve as diagnostic tools for assessing service processes with the goal of improving customer satisfaction (Bitner, 1992; Parasuraman et al., 1988; Seo & Um, 2019).

However, much of the existing research has assumed that satisfaction and dissatisfaction exist on opposite ends of the same spectrum, with satisfaction at one extreme and dissatisfaction at the other (Seo & Um, 2019; Um et al., 2021). This assumption has led researchers to focus primarily on factors that drive satisfaction, under the belief that failing to achieve satisfaction automatically increases dissatisfaction (Seo & Um, 2019; Um et al., 2021). While this simplification has helped interpret findings, recent studies challenge this view by suggesting that factors contributing to satisfaction may not necessarily influence dissatisfaction in the same way (Namkung & Jang, 2010; Seo & Um, 2019). This emerging perspective underscores the need for a more nuanced understanding of how satisfaction and dissatisfaction interact, particularly in multi-service environments. The Kano model provides further support for this view by categorizing attributes into three distinct groups: *DELIGHTERS*, *SATISFIERS*, and *DISSATISFIERS* (Kano et al., 1984). Each category operates through different mechanisms to generate either satisfaction or dissatisfaction. This distinction motivates us to explore whether servicescape and SERVQUAL factors function as *DELIGHTERS*, *SATISFIERS*, or *DISSATISFIERS*. Such categorization can help service providers allocate resources more effectively.

In this study, we integrate the servicescape and SERVQUAL frameworks with the Kano model to explore how service quality dimensions affect both satisfaction and dissatisfaction. While servicescape and SERVQUAL have been widely used to assess service quality and customer satisfaction, this integration will be discussed under the Kano model framework. We will provide a more detailed examination of how different service attributes impact customer experiences in a multi-service context. More specifically, we identify three factors, namely, interior design, comfort, and accessibility from the servicescape, and tangibility, empathy, assurance, reliability, and responsiveness from the SERVQUAL model. By doing so, we will identify key factors that either increase or decrease customer satisfaction.

This study advances the literature by applying these service quality models in the context of multi-service environments, a research setting that poses different challenges compared to single-service environments due to the diverse range of services provided. By examining the distinct dynamics in these more

complex settings, we offer new insights into how service providers can optimize customer experience and satisfaction. In summary, this study contributes to the literature by advancing the theoretical integration of the servicescape, SERVQUAL, and Kano models, providing a more differentiated understanding of how service quality impacts customer satisfaction and dissatisfaction in multi-service environments. The structure of this study is outlined as follows. First, we present a review of the relevant literature and develop our hypotheses. Next, we introduce our research methodology. We then present the regression results. Finally, we offer theoretical and practical discussions, followed by a discussion of limitations and directions for future research.

## 2. Literature Review

### 2.1 Servicescape

The concept of servicescape explores how the environment in which services are delivered influences customers' emotions and behavior. Introduced by Mary Jo Bitner in 1992, it emphasizes the significance of physical elements in service delivery and how customers perceive them through various senses. Kotler (1973) similarly describes servicescape as a set of physical environmental factors perceived by customers through senses like hearing, touch, sight, taste, and smell. Bitner (1992) views the physical environment as a controllable factor that enhances both employee and consumer behavior. Baker et al. (1994) further refined the concept by defining the service environment as the space where services are delivered and interactions occur, consisting of tangible resources like furniture, decor, lighting, and layout that facilitate service performance or consumption. The importance of these physical elements extends beyond mere aesthetics; the physical environment of a service significantly influences customers' first impressions and expectations (Zeithaml et al., 2006). In addition, this environment not only shapes the outward characteristics of a business but also fosters trust in the personnel, products, and the environment itself, thereby contributing to cognitive responses (Bitner, 1992). As such, the physical environment acts as a crucial mediator, influencing the cognitive and emotional responses of both customers and employees (Oh & Kim, 2013).

When it comes to what constitutes servicescape, Baker (1986) classified it into three categories: ambient factors, design factors, and social factors. First, ambient factors refer to background physical elements like temperature, lighting, and scent that influence customers' emotions and perceptions, often unconsciously. These factors subtly impact the overall service experience, even if customers don't realize it. Second, design factors involve the physical layout and structure of the service environment, affecting how customers perceive and interact with the space. For example, furniture arrangement allows easy movement, while color and materials influence feelings, and architectural elements shape first impressions, all contributing to the customer experience. Finally, social factors include interactions between people in the service environment, such as staff and other customers, which directly affect the service experience. Friendly staff and positive social interactions enhance satisfaction, while staff appearance and behavior shape perceptions of

service quality. Recent research aligns with these ideas, highlighting the importance of elements like seating comfort, cleanliness, and aesthetics in customer satisfaction and repeat visits in service environments (Lee et al., 2015; Lee & Lee, 2010; Song, 2020).

This study defines servicescape, based on prior research, as the physical environment in a multi-service setting that influences customer satisfaction through perceptions, emotions, and behaviors (Nguyen & Nham, 2022). To explore this, the study focuses on three key factors: interior design, comfort, and accessibility (Lin & Liang, 2011). These factors were chosen because they are critical in creating a cohesive and positive experience in environments where multiple services are offered simultaneously (Bitner, 1992). Interior design is essential in such settings because it needs to support and harmonize the different services provided, ensuring that the space is both functional and aesthetically pleasing across varied activities (Lin & Liang, 2011). Comfort is crucial as it affects the physical and emotional well-being of customers engaged in a multi-service environment. The elements that constitute comfort, such as music, brightness of lighting, temperature, and humidity in the store, greatly enhance the overall experience and satisfaction of customers (Lee et al., 2015). Finally, accessibility plays a crucial role in allowing customers to navigate between different service areas easily, enhancing convenience and fostering positive perceptions in a multi-service environment (Baker et al., 1994). These factors collectively ensure that the physical environment drives customer satisfaction (Nguyen & Nham, 2022).

## 2.2 The Application and Modification of SERVQUAL in Multi-Service Shop Settings

Service quality is crucial in assessing the excellence of a company's offerings and is key to achieving competitiveness in the target market (Parasuraman et al., 1988). Service quality is viewed as a determinant that has a direct impact on customer satisfaction and purchase intentions, which helps businesses identify areas that need improvement (Cronin Jr & Taylor, 1992). Many studies have emphasized the significance of service quality on customer satisfaction, which is closely tied to overall company performance (Cronin Jr & Taylor, 1992; Dagger & Sweeney, 2006; Oliver, 1981).

Among the various models used to measure service quality, the SERVQUAL model developed by Parasuraman et al. (1988) is one of the most widely recognized. This model assesses service quality by comparing the level of service customers expect with the level they actually experience. The original SERVQUAL model consists of five core dimensions: tangibility, reliability, assurance, responsiveness, and empathy (Brown et al., 1993). Despite its widespread use, SERVQUAL has faced criticism for lacking clear distinctions between its components and for being overly focused on the service process itself (Llosa et al., 1998). In addition, some scholars have argued that SERVQUAL's general framework may not fully capture the unique characteristics of different service industries (Swan & Bowers, 1998). In response to these critiques, Brady et al. (2002) introduced the SERVPERF model, which builds upon SERVQUAL by incorporating broader aspects of the service experience, including interaction quality, physical environment quality, and outcome quality. More recent research has delved deeper into the nuances of service quality, expanding the application of SERVQUAL into areas like cultural and artistic institutions, including theaters and mu-

seums (Moon & Jung, 2009). This body of work has focused on adapting the SERVQUAL model to better suit specific service contexts.

Earlier research often indicates that the SERVQUAL model should be adapted to fit different service contexts more effectively. Building on this idea, the current study reorganizes the five dimensions of the SERVQUAL model into two broader categories: social environment and process environment. The social environment encompasses the dimensions of Tangibility, Assurance, and Empathy, focusing on factors like employee appearance, expertise, and attitude (Bitner et al., 2010; Surprenant & Solomon, 1987; Won & Lee, 2017). The process environment is based on the dimensions of Reliability and Responsiveness, evaluating the consistency and promptness of service delivery (Parasuraman et al., 1988; Won & Lee, 2017). Our approach allows for a more customized assessment of service quality because it better matches the specific needs of complex environments like multi-service environments. By focusing on both how employees interact with customers (social environment) and how consistently and quickly services are delivered (process environment), service providers can gain a clearer understanding of the factors that drive customer satisfaction and dissatisfaction.

### 2.3 Satisfaction and dissatisfaction: unipolar view applied to the Kano model

Many researchers have traditionally viewed satisfaction and dissatisfaction as opposites on the same scale, with satisfaction on one end and dissatisfaction on the other (Seo & Um, 2019; Um et al., 2021). While this bipolar view is widely accepted for its simplicity, it has notable limitations (Seo & Um, 2019). For instance, it struggles to explain situations where satisfaction and dissatisfaction occur simultaneously, where neither is present, or when interpreting neutral responses—such as marking a 4 on a 7-point Likert scale (Namkung & Jang, 2010; Um & Kim, 2018).

In response to these limitations, the unipolar view has gained attention by treating satisfaction and dissatisfaction as distinct, independent concepts rather than simple opposites (Namkung & Jang, 2010; Seo & Um, 2019). For instance, being "very satisfied" does not necessarily mean being "not very dissatisfied." Instead, these two states can be measured and analyzed independently. Supporting this view, Um et al. (2021) proved that online and offline service quality in blended learning affects satisfaction and dissatisfaction differently, both in magnitude and direction. Similarly, Um and Lau (2018) found that healthcare service quality affects satisfaction and dissatisfaction in distinct ways. While the unipolar approach is well-established in various service contexts, its application in multi-service environments is still developing. In these settings, where factors like servicescape and SERVQUAL come into play, independently examining satisfaction and dissatisfaction may provide more practical insights.

The Kano model further supports the notion that satisfaction and dissatisfaction are generated through different mechanisms (Madzik et al., 2024). According to the Kano framework, three key elements play different roles in influencing customer satisfaction. *DELIGHTERS* are factors that enhance satisfaction when present but do not cause dissatisfaction when absent (Füller & Matzler, 2008). *SATISFIERS* can either generate satisfaction when fulfilled or trigger dissatisfaction when unmet (Kano et al., 1984). *DISSATISFIERS*

cause dissatisfaction when they fall below a certain standard but do not increase satisfaction even when they exceed that standard (Seo & Um, 2019; Um et al., 2021). In multi-service environments, where various service quality factors are perceived by customers, the Kano model helps identify what drives satisfaction and dissatisfaction. By integrating the Kano model with a unipolar approach, which measures satisfaction and dissatisfaction independently, this study aims to provide a more nuanced analysis. We will assess different attributes, such as servicescape factors and SERVQUAL factors, to offer a clearer understanding of how each factor contributes to the generation of satisfaction and/or dissatisfaction.

### 3. Hypothesis Development

#### 3.1 The Effect of Servicescape on Satisfaction and Dissatisfaction

Servicescape plays a crucial role in shaping service experiences and has a direct impact on customer satisfaction (Tran et al., 2020). Several existing studies also support this relationship. For example, according to Bitner (1992), the physical aspects of the service environment significantly affect customers' emotions, behaviors, and perceptions of service quality. These elements can either evoke positive feelings or lead to negative impressions. Tran et al. (2020) further support that a well-designed service environment and positive social interactions enhance the customer experience and satisfaction.

In essence, the service environment is pivotal in shaping customers' perceptions and emotions during service encounters, making it critical for improving customer satisfaction. The Kano model, originally developed for product quality, helps explain how servicescape influences satisfaction and dissatisfaction in service settings. It categorizes elements into three types: *DELIGHTERS*, *SATISFIERS*, and *DISSATISFIERS*. Building on empirical evidence that links servicescape to customer satisfaction and incorporating insights from the Kano model, this study proposes the following hypotheses.

First, interior design includes visual elements such as lighting, color, materials, and layout, which positively impact customer satisfaction (Baker, 1986). Wakefield and Blodgett (1994) further highlight that visually stimulating features—such as large displays, signage, and lighting, paired with attractive decor—enhance satisfaction, particularly in high-end service environments. Consistent with previous studies, this study argues that in highly competitive, multi-service markets, where customers are presented with numerous alternatives, distinctive and well-executed interior design becomes essential for service differentiation. A carefully crafted spatial experience not only allows customers to distinguish a service from its competitors but also encourages repeat visits, fostering loyalty and enhancing overall satisfaction. By creating memorable and visually appealing environments, businesses can reinforce their brand identity and promote customer retention. Thus, this study hypothesizes that:

*H1: The interior design of the servicescape in a multi-service environment significantly influences both customer satisfaction and dissatisfaction.*

Second, comfort is defined as the degree of physical and emotional satisfaction experienced by customers within the service environment, which significantly impacts customer satisfaction. This assertion is supported by various studies. For instance, Lee et al. (2015) found that comfort within the physical environment enhances positive customer experiences, thereby contributing to higher satisfaction levels. The study identifies key factors of comfort, including temperature, scent, lighting, color, and seating arrangement, all of which collectively shape the overall quality of comfort. Additionally, Lee et al. (2013) examine the perceived value of fast-food customers and its influence on customer satisfaction and revisit intention, emphasizing that emotional value significantly affects customer satisfaction. This indicates that experiences that evoke comfort and enjoyment play a crucial role in enhancing customer satisfaction. Turning to our research context, we assert that in a multi-service setting where customers experience diverse service touchpoints, maintaining a high level of comfort across all interactions is vital to preventing fatigue or discomfort, thus ensuring a positive, cohesive customer experience. Therefore, we propose that:

*H2: The comfort of the servicescape in a multi-service environment influences both customer satisfaction and dissatisfaction.*

Finally, accessibility is a critical element of the servicescape as it dictates how easily customers can physically reach and navigate to a service space. A strategically chosen location enhances convenience by reducing travel time and effort, which significantly contributes to a positive customer experience. Existing research underscores the importance of accessibility in terms of location. For instance, Baker et al. (1994) found that accessibility positively impacts customer satisfaction and promotes favorable service evaluations. Similarly, Park and Lee (2022) demonstrated that high accessibility in terms of location improves customer satisfaction and increases revisit intentions in the context of Japanese restaurants. In our research, we propose that high accessibility in multi-service environments offers easy customer access and reduces overall utilization time, both of which minimize waiting and travel times. Consequently, this enhances customer satisfaction and increases the likelihood of revisits. Thus,

*H3: The accessibility of the servicescape in a multi-service environment influences both customer satisfaction and dissatisfaction.*

### 3.2 The Effect of SERVQUAL on Satisfaction and Dissatisfaction

SERVQUAL is a widely used tool for measuring service quality, consisting of five dimensions: tangibility, reliability, assurance, responsiveness, and empathy (Parasuraman et al., 1988). Numerous studies have shown that service quality is a key driver of customer satisfaction, with higher service quality leading to increased customer satisfaction (Brady et al., 2002; Cronin Jr & Taylor, 1992; Parasuraman et al., 1988). SERVQUAL has been applied across various industries. For instance, in the banking sector, interaction quality—such as employee friendliness, reliability, and professionalism—has been found to have the most significant impact on customer satisfaction (Yi & La, 2003). Likewise, in the context of cosmetics stores,

factors like reliability, responsiveness, and empathy have been shown to have the most significant influence on customer satisfaction (Song & Jang, 2020). This evidence indicates that while the importance of service quality factors varies by service type, service quality remains crucial in influencing customer satisfaction. Building on these insights, this study applies the Kano model to examine how different dimensions of service quality affect both satisfaction and dissatisfaction in multi-service environments. Using the Kano framework, we will examine whether these service quality factors function as *DELIGHTERS*, *SATISFIERS*, or *DISSATISFIERS*.

First, the SERVQUAL dimension of tangibility is represented by employee impressions, which include the cleanliness and professionalism of employees' appearance. The importance of employee impressions is well supported by existing research. For instance, Bitner et al. (2010) emphasized that employees' dress, appearance, and demeanor significantly influence customers' perceptions of service quality, making it a key predictor of overall service quality. Additionally, studies in the hospital and hotel industries have shown that employees' clean and professional appearance positively affects customer satisfaction (Panda & Das, 2014). This underscores that employee appearance is a crucial factor in evaluating service quality and shaping overall customer satisfaction. Turning to our research context, we argue that in a multi-service shop, where product sales are combined with experiential services, the appearance and dress of employees—reflecting their knowledge and expertise—are particularly important. Therefore, employee impressions are expected to have a significant impact on customer satisfaction. Therefore, we hypothesize that:

*H4: Employee impressions, as reflected in the SERVQUAL dimensions, significantly influence both customer satisfaction and dissatisfaction in a multi-service environment.*

Second, in this study, the SERVQUAL dimension of empathy is defined as the attitude of employees, specifically their ability to show genuine interest in customers and make efforts to understand their needs. This dimension is particularly important in service environments, as supported by numerous studies. For example, Ali et al. (2021) found that in the hotel industry, empathy had the most positive impact on customer satisfaction. Similarly, Hoque et al. (2023) demonstrated that in higher education, empathy also played a critical role in enhancing customer satisfaction. These studies show that empathetic interactions between employees and customers consistently lead to improved satisfaction across various service sectors. In the context of a multi-service environment, which includes an educational component through experiential services, the ability of employees to provide individualized attention and understand specific customer needs becomes especially important. Empathy in this context will likely enhance the customer experience by fostering a more personalized interaction. As a result, we propose that employee attitudes, reflected through their empathy, will significantly influence customer satisfaction and dissatisfaction. Therefore, we hypothesize that:

*H5: Employee attitude, as reflected in the SERVQUAL dimensions, significantly influences both customer satisfaction and dissatisfaction in a multi-service environment.*



Third, in this study, the SERVQUAL dimension of assurance is defined as the expertise of employees, encompassing their knowledge and competence in delivering services. Specifically, in the context of a multi-service shop, this expertise includes employees' thorough knowledge of the products used in experiential services (e.g., storage methods, manufacturing processes, precautions) and their ability to competently answer customer inquiries while efficiently handling the service process. The importance of assurance in influencing service quality and satisfaction has been highlighted in various studies. For example, Oh (2020) found that assurance had the most positive impact on service quality evaluation and customer satisfaction in the assistive technology industry. Similarly, Hoque et al. (2023) identified assurance as a critical factor in enhancing customer satisfaction in the education sector. These findings demonstrate that employees' professional knowledge and skills positively impact customer satisfaction across diverse service environments. Given that the multi-service experience in this study involves both educational elements and unique, non-routine experiences, the professional expertise and competence of employees are likely to be critical. Therefore, we propose that the expertise of employees will significantly influence customer satisfaction and dissatisfaction.

*H6: Employee expertise, as reflected in the SERVQUAL dimensions, significantly influences both customer satisfaction and dissatisfaction in a multi-service environment.*

Fourth, in this study, the SERVQUAL dimension of reliability refers to providing consistent and timely service within the process environment of a multi-service shop. The significance of reliability in affecting customer satisfaction has been demonstrated by numerous studies. For example, Parasuraman et al. (1988) demonstrated that the ability of employees to deliver consistent service and maintain error-free service processes significantly impacts customer satisfaction. Similarly, Zygiaris et al. (2022) emphasized that in the auto care industry, ensuring error-free service processes and prompt service delivery is crucial for enhancing customer satisfaction. Based on the previous findings, we argue that in a multi-service shop, where one-day experiential services (e.g., pop-up events or classes) are offered, customers typically reserve in advance, creating high expectations for consistency and timeliness. Given the time-sensitive nature of these services, the ability to deliver the expected experience promptly and without errors is crucial for influencing customer satisfaction. Therefore, we hypothesize that:

*H7: Reliability, as reflected in the SERVQUAL dimensions, significantly influences both customer satisfaction and dissatisfaction in a multi-service environment.*

Finally, this study refers to responsiveness from SERVQUAL as the ability to promptly address customer needs or issues within the process environment of a multi-service shop. Specifically, it involves accurately informing customers about the service process (stages) and the ability to quickly provide services in response to customer requests (Parasuraman et al., 1988). The importance of responsiveness in affecting customer satisfaction has been highlighted in various studies. For instance, Nambisan et al. (2016) found that responsiveness is crucial for positive service quality evaluations. Similarly, Zygiaris et al. (2022)

showed that in the auto care industry, short wait times in interactions between employees and customers have the most positive impact on service quality evaluations. Additionally, Ali et al. (2021) confirmed that responsiveness positively influences customer satisfaction in the hotel industry. Given the importance of responsiveness in the service context, we argue that in most multi-service shops, the central offering involves customers creating personalized products (e.g., soap, artwork, perfume, rings, desserts). These items are typically customized to reflect customer preferences, such as design modifications or additional options. Due to the time constraints inherent in these services, the ability to promptly meet customer demands while ensuring high-quality outcomes hinges on efficient interactions between customers and staff. The length and effectiveness of these interactions are likely to have a substantial impact on perceived service quality and overall customer satisfaction. Therefore, we expect that responsiveness will significantly influence both customer satisfaction and dissatisfaction in a multi-service environment.

*H8: Responsiveness, as reflected in the SERVQUAL dimensions, significantly influences both customer satisfaction and dissatisfaction in a multi-service environment.*

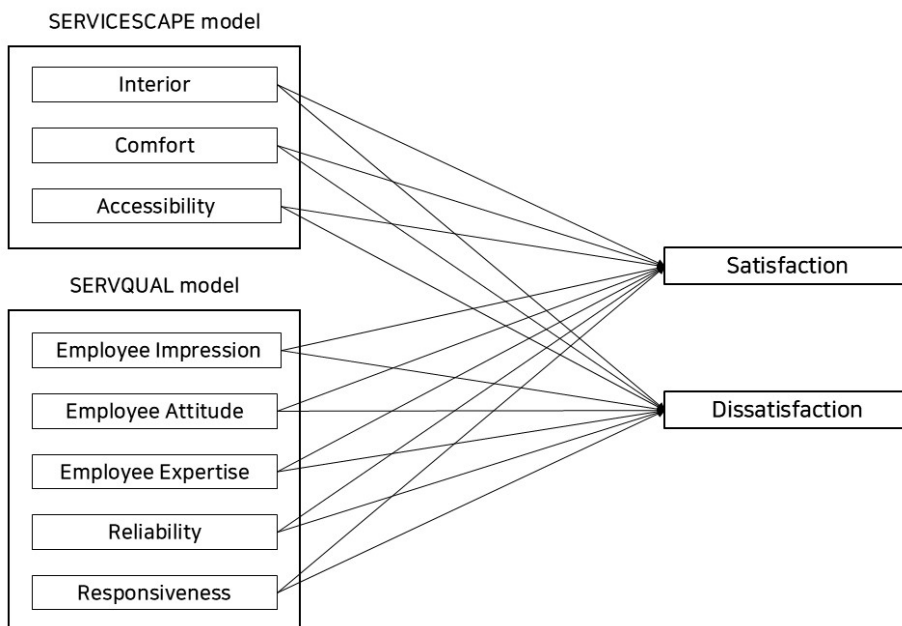


Figure 1. Research Framework

## 4. Research Methodology

### 4.1 Data Collection Procedures

The survey participants were selected using a self-administered online method conducted via various

social media platforms, including Facebook, Instagram, and KakaoTalk, to maximize reach and ensure diversity among participants. Prior to the main survey, a pilot survey was conducted with 20 participants to identify and address potential issues in the survey design and implementation. This step was crucial for refining the questionnaire and enhancing both its reliability and validity. The questionnaire, originally designed in English, was translated into Korean by bilingual experts to maintain linguistic accuracy. This step was essential to accommodate the participants’ linguistic backgrounds and enhance the quality of responses. The final structured survey was administered over a one-week period, from June 1 to June 7, 2024. The administration period allowed for sufficient time to gather a comprehensive set of responses. After the data collection phase, rigorous data cleaning procedures were implemented. This process included the removal of incomplete or insincere responses to ensure the integrity of the dataset. Following this, a total of 131 valid responses were retained for further analysis and hypothesis testing. Table 1 summarizes the respondent demographics, including age, education level, occupation, store type, average annual visit frequency, and average duration of stay in the store. The main characteristics of the respondents are as follows: The majority were in their twenties, with 78% aged between 19 and 26 years old. Most respondents were students (58.8%). Regarding visit frequency, nearly half (48.9%) visited once per year, while a small portion (5.3%) visited more than ten times per year. The majority of respondents stayed between 1 hour and 1 hour and 30 minutes.

**Table 1.** Sample Profiles

	Characteristics	Frequency	Percentage(%)
Age	19-22	50	38.2
	23-26	52	39.7
	27-30	19	14.5
	31-34	3	2.3
	34+	7	5.3
Education	High School	9	6.9
	College	109	83.2
	Graduate school	13	9.9
Job	Student	77	58.8
	Job seeker	5	3.8
	Office worker	37	28.2
	Self-employment	6	4.6
	Housewife	4	3.1
	Others	2	1.5
Type of store visited	Perfume Craft Shop & Purchase	48	36.6
	Painting Craft Shop & Purchase	25	19.1
	Soap Craft Shop & Purchase	3	2.3
	Dessert Craft Shop & Purchase	23	17.6
	Pottery Craft Shop & Purchase	11	8.4
	Punch Needle Craft Shop & Purchase	5	3.8
	Others	16	12.2

	Characteristics	Frequency	Percentage(%)
Average number of visits per year	Less than 1	1	0.8
	1	64	48.9
	2	32	24.4
	3	11	8.4
	4	4	3.1
	5	9	6.9
	6	3	2.3
	More than 6	7	5.3
Average stay time	Less than 30 minutes	10	7.6
	30min-1h	27	20.6
	1h-1h30min	51	38.9
	1h30min-2h	30	22.9
	2h-2h30min	9	6.9
	2h30min-3h	3	2.3
	3h+	1	0.8

## 4.2 Measurement of the Constructs

The measurement items for the variables of interest were adopted from previous research. The study identified three independent variables: physical environment, social environment, and process environment. First, the physical environment was assessed through sub-variables of interior, comfort, and accessibility, drawn from the research of Bitner (1992), Kim and Kim (2023), Oh (2020), Heo and Woo (2013), Thang and Tan (2003), Lee et al. (2009), and Shin et al. (2023). Each sub-variable was evaluated using three items, representing the tangible aspects of the shopping context. Second, social environment was evaluated through sub-variables of employee impression, attitude, and expertise, as per studies by Oh (2020), Won and Lee (2017), and Seo and Heo (2010). Each sub-variable was measured with three items, emphasizing the role of human interactions in the shopping experience. Finally, process environment was measured through sub-variables of reliability and responsiveness, based on the work of Oh (2020) and Won and Lee (2017). Each sub-variable was assessed using three items, addressing the consistency and promptness of service delivery. To apply the Kano model to our research, satisfaction and dissatisfaction were treated as separate mediating variables. Satisfaction and dissatisfaction were measured using three items each, following studies by Oh (2020) and Seo and Um (2019). Finally, the dependent variable, revisit intention, was measured using three items derived from the research of Oh (2020). All measurement items were assessed using a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree).

**Table 2.** Measurement Items and Confirmatory Factor Analysis Results

Constructs and Instruments	Standardized Factor Loadings	Standard Error	Source
<b>Physical environment (Interior)</b>	<b>Cronbach's <math>\alpha = .854</math></b>		Binter (1992) and Kim & Kim (2023)
The multi-service provider's interior was appealing.	.868		
I wanted to take photos of the multi-service provider's interior.	.799	.088	
The multi-service's interior had a unique character.	.776	.115	
<b>Physical environment (Comfort)</b>	<b>Cronbach's <math>\alpha = .905</math></b>		Binter (1992) and Heo et al. (2013)
The multi-service provider provided a pleasant environment.	.920	.083	
Products and items in the multi-service provider were neat and tidy.	.918	.092	
The surrounding environment of the multi-service provider was clean.	.791		
<b>Physical environment (Accessibility)</b>	<b>Cronbach's <math>\alpha = .873</math></b>		Thang & Tan (2003) and Lee (2009)
The multi-service provider was conveniently located near a bus stop or subway station.	.757	.102	
The multi-service shop is in a convenient, easy-to-find location.	.979	.107	
The multi-service provider's location had ease of access.	.799		
<b>Social environment (Employee impression)</b>	<b>Cronbach's <math>\alpha = .932</math></b>		Parasuraman et al. (1988) and Cronin Jr & Taylor (1992)
The employee had a neat appearance.	.893	.064	
The employee wore a clean uniform.	.935	.063	
The employee made a good impression.	.893		
<b>Social environment (Employee attitude)</b>	<b>Cronbach's <math>\alpha = .901</math></b>		Parasuraman et al. (1988), Doney & Cannon (1997) and Cronin Jr & Taylor (1992)
The employee showed genuine interest in my needs.	.834	.080	
The employee provided the necessary service to me.	.885	.061	
The employee provided the service to me genuinely.	.909		
<b>Social environment (Employee expertise)</b>	<b>Cronbach's <math>\alpha = .931</math></b>		Parasuraman et al. (1988), Doney & Cannon (1997) and Cronin Jr & Taylor (1992)
The employee told me exactly about the service.	.889		

Constructs and Instruments	Standardized Factor Loadings	Standard Error	Source
The employee sufficiently answered my questions.	.929	.054	
The employee skillfully provided the service in an orderly manner.	.910	.057	
<b>Process environment (Reliability)</b>	<b>Cronbach's <math>\alpha</math> = .929</b>		Parasuraman et al. (1988) and Cronin Jr & Taylor (1992)
The multi-service provider provided its services at the time it promises to do so.	.821		
The multi-service provider provided the service right.	.927	.085	
The multi-service provider provided the service according to my appointment schedule.	.974	.071	
<b>Process environment (Responsiveness)</b>	<b>Cronbach's <math>\alpha</math> = .895</b>		Parasuraman et al. (1988) and Cronin Jr & Taylor (1992)
The employee provided the service promptly when needed.	.953		
The employee provided the service promptly upon request.	.945	.051	
When customers had problems, the employee was able to address their complaints immediately.	.716	.080	
<b>Satisfaction</b>	<b>Cronbach's <math>\alpha</math> = .827</b>		Oliver & Swan (1989) and Oh (2020)
The experience with the multi-service provider was better than expected.	.790		
The experience with the multi-service provider was satisfactory in terms of cost and time. #			
I was satisfied with my decision to use the multi-service provider.	.898	.097	
<b>Dissatisfaction</b>	<b>Cronbach's <math>\alpha</math> = .964</b>		Seo & Um (2019)
I regretted my decision to use the multi-service provider.	.960		
I was dissatisfied with the service I received from the multi-service provider.	.956	.040	
I felt that the experience with the multi-service provider was not worthwhile in terms of time and cost.	.928	.045	

Note. An item marked with # did not produce both Standardized Factor Loadings (SFL) and Standard Error (S.E.) estimates, as it was excluded from the CFA model to improve overall data quality.

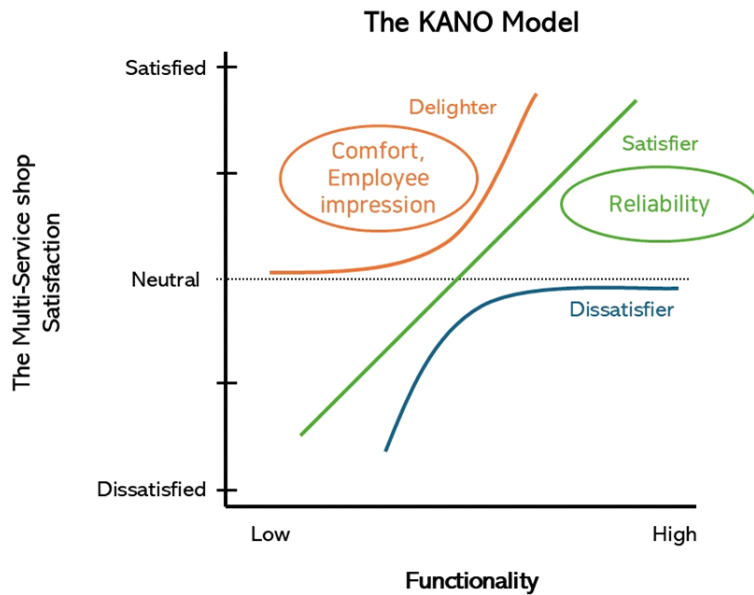


Figure 2. Application of the Kano model

### 4.3 Common Method Bias

To detect common method bias, this study employed the common latent factor analysis proposed by Podsakoff et al. (2003) as a statistical remedy. This technique compares the model fit indices between the initial confirmatory factor analysis (CFA) measurement model and the same model with an added common latent factor. The fit indices calculated for the two models were  $\chi^2/df = 1.904$ , CFI = 0.920, IFI = 0.922, and RMSEA = 0.083 for the initial model, and  $\chi^2/df = 1.833$ , CFI = 0.927, IFI = 0.928, and RMSEA = 0.080 for the extended model. These results indicate a difference between the two models, confirming the presence of common method bias.

### 4.4 Measurements Validity and Reliability Testing

Before testing our hypotheses, it is crucial to establish the reliability and validity of the measurement items used in this study. Accordingly, we undertook several statistical procedures to assess these attributes. First, to ensure the reliability of the measurement items, we calculated Cronbach's alpha for each variable. The values ranged from .827 for satisfaction to .964 for dissatisfaction, all exceeding the acceptable threshold of 0.7 (Johnson & Wichern, 2002). This confirms that the measurement items exhibit strong internal consistency. Next, we performed confirmatory factor analysis (CFA) to validate the measurement items. The CFA results produced the following fit indices:  $\chi^2 = 637.505$ ,  $df = 332$ ,  $\chi^2/df = 1.920$ , CFI = .921, IFI = .922, and RMSEA = .084. These indices suggest an adequate fit of the model to the data and support the unidimensionality of the measurement items. To further evaluate internal validity, we examined standardized factor loadings (SFL), composite reliability (CR), and average variance extracted

(AVE). The results are as follows: (1) SFLs ranged from .716 to .979, all significant and above the 0.5 threshold; (2) CR values ranged from .833 to .964, all exceeding the recommended minimum of 0.7; and (3) AVE values ranged from 0.665 to .899, all greater than the benchmark of 0.5. These findings collectively support the internal validity of the measurement items (Hair et al., 2010). Lastly, to confirm discriminant validity, we compared the MSV, MaxR, AVE values, and correlation coefficients. As Table 3 presents, the AVE values for each variable were all larger than their corresponding MSV values, and the MaxR values for each variable were larger than the corresponding MSV values. Additionally, the square root of the AVE for each variable was greater than the highest correlation with any other variable, supporting discriminant validity (Hair et al., 2010).

**Table 3.** Correlation and Discriminant Validity

Constructs	CR	AVE	MSV	MaxR (H)	1	2	3	4	5	6	7	8	9	10
1. Physical environment (Interior)	.856	.665	.534	.863	<b>.815</b>									
2. Physical environment (Comfort)	.910	.772	.637	.927	.731	<b>.878</b>								
3. Physical environment (Accessibility)	.885	.723	.140	.962	.233	.305	<b>.850</b>							
4. Social environment (Employee impression)	.933	.823	.637	.937	.538	.798	.374	<b>.907</b>						
5. Social environment (Employee attitude)	.895	.810	.723	.908	.473	.642	.326	.772	<b>.900</b>					
6. Social environment (Employee expertise)	.935	.827	.723	.938	.463	.615	.356	.689	.850	<b>.909</b>				
7. Process environment (Reliability)	.935	.827	.613	.963	.403	.578	.302	.644	.783	.759	<b>.910</b>			
8. Process environment (Responsiveness)	.909	.772	.503	.951	.315	.554	.354	.664	.709	.708	.689	<b>.879</b>		
9. Satisfaction	.833	.715	.596	.853	.569	.730	.343	.772	.737	.717	.743	.608	<b>.846</b>	
10. Dissatisfaction	.964	.900	.165	.966	-.139	-.268	-.059	-.285	-.278	-.284	-.406	-.290	-.322	<b>.948</b>

Note. 1. The square root of AVE is on the diagonal.  
 2. The correlation is significant at the .01 level.



## 5. Hypothesis Testing

We employed hierarchical regression analysis to test the hypotheses of this study because it allowed us to identify the specific impact of various environmental factors on satisfaction and dissatisfaction while controlling for relevant variables. In the first step, we established a baseline model (M1) in which control variables, such as average annual visit frequency (number of visits) and average time spent in the store (hours), were regressed on satisfaction. We then introduced eight factors (i.e., physical environmental factors consisting of interior, comfort, and accessibility; socio-environmental factors consisting of employee impression, employee attitude, and employee expertise; and process factors consisting of reliability and responsiveness) in model M2 to assess their impact on satisfaction. Similarly, M3 and M4 were developed to evaluate the impact of these factors on dissatisfaction. Our regression results indicated that the changes in R-squared were meaningful, and the F-value was statistically significant.

First, we found that comfort ( $\beta_{\text{comfort}} = .233$ ,  $p < .05$  in M2), employee impression ( $\beta_{\text{employee impression}} = .255$ ,  $p < .05$  in M2), and reliability ( $\beta_{\text{reliability}} = .166$ ,  $p < .1$ ) were statistically significant predictors of satisfaction, with employee impression having the largest effect size, followed by comfort and reliability. In contrast, interior, accessibility, employee attitude, employee expertise, and responsiveness did not show statistically significant effects on satisfaction. Then, regarding the relationships between service-scape and SERVQUAL factors and dissatisfaction, we found that only reliability was a statistically significant factor in decreasing dissatisfaction ( $\beta_{\text{reliability}} = -.335$ ,  $p < .01$ ) in M4, while the other variables did not significantly increase or decrease dissatisfaction. Based on the results of the hierarchical regression analysis, the factors were classified according to the Kano model (Kano et al., 1984). The X-axis of the figure represents the level of fulfillment of the sub-factors, while the Y-axis represents the degree of satisfaction and dissatisfaction among multi-service users. Figure 2 illustrates the application of the Kano model to our results. First, the orange line in the model represents attractive quality factors, or *DELIGHTERS*. The regression analysis showed that *Comfort and Employee Impression* were statistically significant for satisfaction but not for dissatisfaction, classifying them as *DELIGHTERS*. Second, the green line represents *SATISFIERS*, where the degree of fulfillment has a linear relationship with both satisfaction and dissatisfaction. The analysis confirmed that *Reliability* is a satisfier—higher reliability increases satisfaction and reduces dissatisfaction. Finally, the blue line represents *basic quality factors*, or *DISSATISFIERS*. These factors, if not met, significantly increase dissatisfaction, but their presence does not necessarily boost satisfaction. The regression results did not identify any *DISSATISFIERS*, meaning no factors in this study significantly caused dissatisfaction when absent.

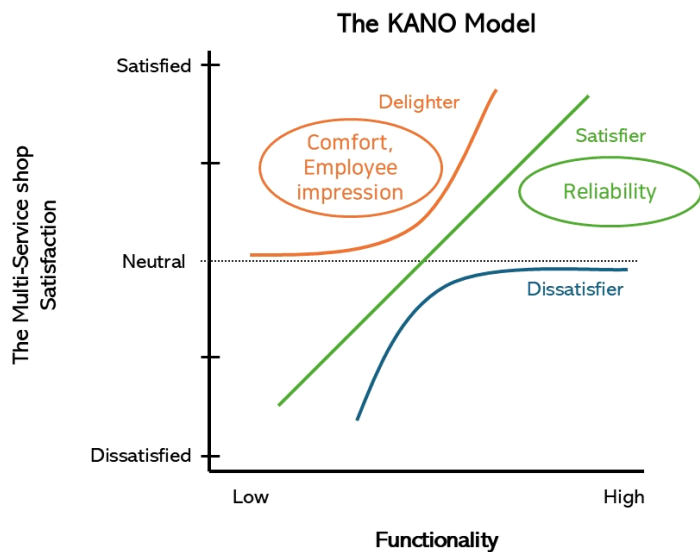
**Table 4.** Regression Results

Dependent Variable	Satisfaction		Dissatisfaction	
	M1	M2	M3	M4
<b>Control variables</b>				
Average annual visit frequency	-.136	-.020	-.003	-.063
Average duration of stay in the store	.134	.041	-.221**	-.130
<b>Independent variables</b>				
Interior		.085		.099
Comfort		.233**		-.124
Accessibility		.006		.085
Employee impression		.255**		-.116
Employee attitude		-.042		.178
Employee expertise		.183		-.078
Reliability		.166*		-.335**
Responsiveness		.029		-.027
<b>Mediators</b>				
Change in R <sup>2</sup>	.039	.545	.049	.147
Change in F value	2.623*	19.66***	3.278**	2.751***

\*\*\* Significant at .01

\*\* Significant at .05

\* Significant at .1



**Figure 3.** Application of the Kano model

## 6. Discussion

### 6.1 Theoretical Implications

There are several key theoretical implications. First, this study integrates the Kano model with the servicescape and SERVQUAL frameworks, offering a comprehensive approach to analyzing customer satisfaction and dissatisfaction in multi-service environments. By adopting a unipolar perspective, we emphasize the independence of satisfaction and dissatisfaction, challenging the traditional bipolar view and enriching the understanding of customer experiences. The application of the Kano model further highlights the distinct roles of various service attributes in shaping customer perceptions. This classification not only refines the Kano model but also underscores the complexities of customer expectations across diverse service settings.

Second, this research identifies key elements of the servicescape that significantly impact customer satisfaction in a multi-service environment. Consistent with previous studies (Lee et al., 2015; Lee et al., 2013), our findings confirm that the servicescape positively influences satisfaction, with comfort emerging as a critical factor in the customer experience. However, unlike prior research that emphasizes aesthetic attributes such as interior design and accessibility, our results show no significant effect in these areas. One possible explanation is that customers may prioritize practical comfort over external aesthetics. In other words, once basic aesthetic expectations are met, further enhancements may not lead to increased satisfaction or dissatisfaction, as customers become more focused on their overall experience rather than the visual aspects of the environment. Similarly, the reduced importance of accessibility could be attributed to the well-developed public transportation infrastructure, which meets customer needs and thus does not significantly influence their perceptions. Therefore, service organizations should focus on designing comfort-centered servicescapes to enhance the customer experience. This approach will be essential for future service improvements and strategic planning.

Finally, this study reconceptualizes SERVQUAL for multi-service shops by focusing on social factors (i.e., employee impression, attitude, and expertise) and process factors (i.e., reliability and responsiveness). Our findings reveal that tangibles and reliability significantly impact customer satisfaction, consistent with existing studies in other service contexts: hospitals (Panda & Das, 2014) and hotels (Zygiaris et al., 2022). However, unlike previous research that emphasizes empathy, assurance, and responsiveness (Ali et al., 2021; Hoque et al., 2023), we found these factors did not significantly influence customer satisfaction or dissatisfaction. One possible reason for this is the nature of multi-service shops, where customer expectations for empathy and assurance are relatively low. Customers in such environments tend to prioritize tangible results and unique experiences over relational quality. For example, in services like one-day classes or short consultations, the focus is more on outcomes—such as a finished project or acquired skill—rather than interactions with service personnel. Thus, this outcome-oriented mindset diminishes the emphasis on empathy and assurance.

## 6.2 Practical Implications

Based on the findings, this study presents several important managerial implications. First, applying the Kano model in a multi-service context provides valuable insights into efficient resource deployment. By identifying the drivers of customer satisfaction and dissatisfaction, managers can allocate resources more effectively. The findings help managers meet customer expectations and prioritize elements that significantly enhance satisfaction. Second, since comfort, as a subfactor of servicescape, is categorized as a "Delighter" within the Kano framework, managers should pay particular attention to the store environment, product organization, and cleanliness. These factors are expected to increase customer satisfaction and loyalty. Therefore, creating a comfortable service environment is essential for ensuring customers have positive, enjoyable experiences, which in turn improves satisfaction and encourages repeat visits. Additionally, the impression employees create—through their appearance, attire, and demeanor—is a critical aspect of customer service and is recognized as a key Delighter in the customer experience. Given the importance of employees forming positive initial impressions to build trust with customers, and the frequent interactions between them in a multi-service environment, this aspect becomes particularly important. Thus, managers can enhance customer satisfaction by implementing clear guidelines for employee appearance and attire, along with comprehensive training programs to improve customer interactions. Finally, the findings highlight that reliability functions as a "satisfier," implying that reliability can increase satisfaction or dissatisfaction. Investing in reliability not only enhances customer satisfaction but also optimizes resource allocation. By avoiding excessive investment in Dissatisfiers and prioritizing Satisfiers and Delighters, service providers can make the most of their limited resources. This strategic approach ensures that fundamental customer needs are met while delivering exceptional experiences that drive loyalty.

## 7. Limitation

This study has several limitations. First, it primarily samples young individuals in Busan aged 19 to 29. While these findings are useful for developing business strategies targeting this demographic, they limit the generalizability to other age groups and regions. A broader demographic and geographic scope might reveal different DELIGHTERS, SATISFIERS, and DISSATISFIERS. Therefore, future research should strive for a representative sample that includes diverse age groups and locations. Second, common method bias is a significant limitation, stemming from the use of self-administered questionnaires in single-respondent surveys. This bias may inflate relationships between variables, leading to overestimated results. Although this method was selected due to time and cost constraints, future research should consider multiple data sources to mitigate this bias. Employing longitudinal designs could also help control for common method variance. Third, most respondents had experiences solely with a specific type of multi-service shop (i.e., craft workshops), which limits the generalizability of results across all multi-service formats. Future studies

should include a variety of multi-service shop types, such as exhibitions, experiential setups, and pop-up stores, to provide more comprehensive insights. Finally, this study used the primary participants in their twenties. This restricts the generalizability of our findings to a wider population. To fully understand customer experiences in multi-service environments, future research should consider a broader age range. While our research focus on craft workshops, which primarily cater to younger customers, aligns with this specific context, it's important to acknowledge the need for future studies to investigate diverse demographics across various multi-service environments.

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