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Healthcare Management in Primary Care: How Physician-Patient Relationships through Coaching Leadership Contribute to Patient Well-being and Service Outcomes

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Abstract

This study examined the impact of physicians' coaching leadership on physician-patient relationships and its effects on patient well-being and service outcomes from a healthcare management perspective in primary care settings, where establishing trust-based relationships is crucial for effective healthcare delivery. The study employed a cross-sectional survey design with 306 adult patients from primary care institutions in Korea. A structural multilevel model was applied using PLS-SEM to address multicollinearity issues among coaching leadership sub-factors. Coaching leadership was measured using Stowell's four-dimension framework, while psychological safety and customer satisfaction served as mediating variables. Rigorous common method bias testing was conducted to ensure validity. Results revealed that physicians' coaching leadership had significant direct effects on patients' psychological safety (β=0.803, $p<.001$) and customer satisfaction (β=0.476, $p<.001$). The relationship between coaching leadership and psychological safety was significantly moderated by frequency of healthcare utilization, with stronger effects among regular healthcare users. All hypothesized mediation paths were statistically significant, with coaching leadership influencing word-of-mouth intention through psychological safety and customer satisfaction. This study contributes to healthcare management literature by empirically validating the effectiveness of coaching leadership in primary care settings and identifying boundary conditions for its effectiveness across different patient characteristics. The findings provide practical implications for healthcare managers seeking to enhance patient experiences and service outcomes.

Keywords: coaching leadership, psychological safety, healthcare service quality, physician-patient relationship, word-of-mouth intention, PLS-SEM

1. Introduction

In modern healthcare management paradigms, the physician-patient relationship transcends simple information delivery to become a key factor that significantly influences patients' well-being and treatment outcomes (Street et al., 2009). Primary care institutions, serving as patients' first point of contact with healthcare providers, play a crucial role in implementing patient-centered care based on comprehensiveness, continuity, and coordination (Lee et al., 2007). Empirical evidence supports this importance: Fan et al. (2005) demonstrated that patients who consistently see the same physician show 17.3 points higher interpersonal satisfaction and 16.3 points higher organizational satisfaction compared to those who rarely see the same physician. Primary care institutions, as patients' first point of contact with

healthcare providers, require quality physician-patient relationships for effective management and optimal healthcare delivery. Within this context, physicians' coaching leadership is gaining attention as an essential competency for implementing patient-centered healthcare management and encouraging patient participation in treatment processes (Goleman et al., 2002).

The Ministry of Health and Welfare's 2023 Action Plan emphasizes strengthening primary care through enhanced chronic disease management utilizing ICT-based health management platforms and establishing dedicated support systems for primary care services (Ministry of Health and Welfare, 2023). This policy aims to strengthen the core attributes of primary care: first contact, comprehensiveness, continuity, and coordination (Lee et al., 2007). However, primary care in Korea faces significant challenges including frequent patient mobility between institutions and limitations in establishing long-term trust relationships and healthcare management continuity (Lee et al., 2013), necessitating new approaches to enhance physician-patient relationship quality.

Despite the theoretical significance of coaching leadership in healthcare environments, empirical research on its impact on patient well-being and service outcomes remains insufficient, particularly from a healthcare management perspective. Specifically, systematic analysis is needed regarding the mechanisms through which coaching leadership leads to enhanced patient well-being and improved service outcomes in primary care settings. Furthermore, there is limited understanding of how patient characteristics might moderate these relationships.

This study aims to address these research gaps by analyzing the influence of physicians' coaching leadership on patients' word-of-mouth intention through the mediating effects of psychological safety (patient well-being) and customer satisfaction. Additionally, the study examines whether patient characteristics, particularly frequency of healthcare utilization, moderate the relationship between coaching leadership and psychological safety. To enhance methodological rigor, the study employs a structural multilevel model to address multicollinearity issues among coaching leadership sub-factors and conducts rigorous common method bias testing.

2. Theoretical Background and Hypothesis Development

2.1. Coaching Leadership in Healthcare Management

Coaching leadership is a leadership style in which the leader guides constituents through self-reflection, capacity building, feedback, and growth promotion based on trust and partnership (Cable & Graham, 2018). In healthcare settings, coaching leadership is operationalized as the physician's ability to provide treatment direction, develop health management capacity, evaluate the treatment process, and form trust relationships with patients (Ellinger et al., 2003).

From a healthcare management perspective, coaching leadership represents a paradigm shift from traditional physician-patient relationships characterized by information asymmetry and physician dominance toward more collaborative, patient-centered relationships (Goleman et al., 2002). This shift aligns with contemporary healthcare management approaches that emphasize patient engagement, shared decision-making, and continuous relationship development (Stewart et al., 2014).

Empirical evidence supports the effectiveness of coaching leadership in healthcare settings. Cable and Graham (2018) reported that structured coaching interventions significantly enhanced clinical leadership competencies in nursing, with participants consistently reporting increased confidence and improved self-leadership. Furthermore, Li et al. (2022) demonstrated that coaching leadership facilitates employee-driven innovative behavior through interactional justice and organizational identification, providing evidence for coaching leadership effectiveness in healthcare environments.

Stowell (1986) conceptualized coaching leadership as comprising four dimensions: direction provision, capacity development, performance evaluation, and relationship building. In primary care contexts, direction provision involves clearly communicating treatment plans and health management recommendations; capacity development encompasses enhancing patients' health literacy and self-management skills; performance evaluation includes providing feedback on treatment progress and outcomes; and relationship building focuses on establishing trust and rapport with patients (Whitmore, 2017).

2.2. Coaching Leadership and Psychological Safety (Patient Well-being)

Psychological safety refers to a psychological condition where individuals believe that interpersonal risk-taking is safe (Edmondson, 1999). In healthcare contexts, psychological safety represents patients' belief that they can express concerns, ask questions, and share personal information without fear of negative consequences or judgment. As a key dimension of patient well-being, psychological safety facilitates more effective healthcare interactions and treatment adherence (Zhang et al., 2023).

According to Fuertes et al. (2015), collaborative relationships between physicians and patients enhance patients' psychological safety, which improves expectations about treatment outcomes and overall satisfaction. Barnett and Flora (2016) reported that communication using a coaching approach promotes patients' psychological safety and facilitates participation in the treatment process. Supporting this theoretical connection, Platonova et al.'s (2008) structural equation modeling analysis verified that trust in physicians and positive interpersonal relationships serve as major determinants of patient satisfaction and loyalty, reinforcing the importance of the relationship-building dimension of coaching leadership in fostering patients' psychological safety.

The direction provision component of coaching leadership helps create psychological safety by reducing uncertainty about treatments, while relationship building establishes the trust necessary for patients to feel safe in healthcare interactions. Based on these theoretical connections, we hypothesize:

H1: Physicians' coaching leadership will have a positive effect on patients' psychological safety (patient well-being).

2.3. Coaching Leadership and Customer Satisfaction

Customer satisfaction in healthcare contexts refers to patients' overall evaluation of their medical service experiences (Oliver, 1997). Coaching leadership enhances satisfaction by identifying constituents' needs and expectations, providing customized support and feedback, and forming positive relationships (Boyce et al., 2010). In the context of medical services, when physicians demonstrate coaching leadership, patients perceive themselves as partners in the treatment process, receive sufficient information, and experience care and support (Ladyshewsky & Taplin, 2021).

According to Thom et al. (2015), healthcare settings that implemented health coaching showed significant improvements in patients' chronic disease management experience scores, with clinic re-use recommendation rates increasing from 73% to 85%. Kim et al. (2022) found that physicians' patient-centered and supportive communication styles had the greatest impact on patient satisfaction.

Performance evaluation aspects of coaching leadership may particularly influence satisfaction by providing patients with clear feedback about their health status and progress. Based on these theoretical and empirical foundations, we hypothesize:

H2: Physicians' coaching leadership will have a positive effect on patients' customer satisfaction.

2.4. Relationship between Psychological Safety and Customer Satisfaction

The relationship between psychological safety and customer satisfaction is well-established in service literature. Li et al. (2021) confirmed that psychological safety directly positively affects customers' perception of service value and service quality, leading to overall customer satisfaction. When patients experience enhanced well-being through psychological safety in their relationship with physicians, they can more freely express their conditions and concerns, which helps physicians more accurately identify patients' needs and provide appropriate treatment.

Psychological safety creates an environment where patients feel comfortable sharing personal health information, discussing treatment options, and expressing concerns. This open communication enables physicians to provide more tailored care, potentially leading to higher satisfaction. Furthermore, psychological safety reduces cognitive and emotional barriers to healthcare engagement, allowing patients to more fully participate in and benefit from medical services. Based on these mechanisms, we hypothesize:

H3: Patients' psychological safety (patient well-being) will have a positive effect on customer satisfaction.

2.5. Relationships of Psychological Safety and Customer Satisfaction with Word-of-Mouth Intention

Word-of-mouth intention, as a measure of service outcomes, is defined as consumers' willingness to voluntarily convey their experiences to others (Lee et al., 2014). The influence of word-of-mouth is particularly significant in fields like healthcare services where experiential evaluation is crucial (Ennew et al., 2000).

Alexandris et al. (2004) argued that psychological safety underpins customer satisfaction, which becomes a strong antecedent of positive word-of-mouth intention as a service outcome. When patients experience well-being through a safe service environment, they are more likely to positively describe their experiences to others and recommend the medical institution (Hong & Yang, 2009).

Customer satisfaction is also an important antecedent of service outcomes such as word-of-mouth intention. Yun and Park (2022) reported that customer satisfaction substantially contributes to word-of-mouth intention and revisit intention. Based on these empirical findings and theoretical mechanisms, we hypothesize:

H4: Patients' psychological safety (patient well-being) will have a positive effect on word-of-mouth intention

(service outcome).

H5: Patients' customer satisfaction will have a positive effect on word-of-mouth intention (service outcome).

2.6. Moderating Role of Patient Characteristics

Bass and Riggio (2006) argued that "leadership effects interact with context," suggesting that the effectiveness of coaching leadership may vary depending on patient characteristics. Jordan and Livingstone (2013) noted in their health literacy research that patients' existing knowledge levels, learning readiness, and self-efficacy can influence their receptivity to and the effectiveness of capacity development activities.

The frequency of healthcare utilization represents an important contextual factor that may influence how coaching leadership affects psychological safety. Patients who regularly use healthcare services likely have more opportunities to develop relationships with their physicians, potentially amplifying the effects of coaching leadership on psychological safety. Regular interactions allow for the development of deeper rapport and trust, core elements necessary for psychological safety to develop (Edmondson, 1999).

Furthermore, patients who utilize healthcare services regularly typically have chronic conditions requiring ongoing management, making the quality of physician-patient relationships particularly salient to their healthcare experiences. For these patients, physicians' coaching leadership behaviors may have stronger effects because they have greater relevance to long-term health management needs. Based on these theoretical considerations, we hypothesize:

H6: Frequency of healthcare utilization will moderate the relationship between coaching leadership and psychological safety, such that the relationship will be stronger for patients who utilize healthcare services regularly compared to those who use services only when symptoms appear.

2.7. Hypotheses Regarding Mediating Effects

Synthesizing previous studies, coaching leadership can influence service outcomes through patient well-being and customer satisfaction. Physicians' coaching leadership may enhance patients' psychological safety (well-being), which increases customer satisfaction and ultimately strengthens word-of-mouth intention, suggesting a sequential mediating path (Cable & Graham, 2018; Walker et al., 2008).

The influence of coaching leadership on customer satisfaction may be partially mediated by psychological safety. When physicians demonstrate coaching leadership behaviors, they create an environment where patients feel psychologically safe to express concerns and ask questions. This enhanced psychological safety, in turn, contributes to higher levels of customer satisfaction (Fuertes et al., 2015). This indirect pathway complements the direct effect of coaching leadership on customer satisfaction posited in H2.

Similarly, the relationship between coaching leadership and word-of-mouth intention may be mediated by customer satisfaction. Coaching leadership behaviors that address patients' needs and concerns lead to greater satisfaction with medical services, which subsequently increases patients' willingness to recommend the physician to others (Kim et al., 2022). Coaching leadership may also influence word-of-mouth intention through a sequential mediation path involving both psychological safety and customer satisfaction. Based on these theoretical mechanisms, we hypothesize:

H7: Patients' psychological safety (patient well-being) will mediate the relationship between coaching leadership and customer satisfaction.

H8: Patients' customer satisfaction will mediate the relationship between coaching leadership and word-of-mouth intention (service outcome).

H9: Patients' psychological safety (patient well-being) and customer satisfaction will sequentially mediate the relationship between coaching leadership and word-of-mouth intention (service outcome).

2.8. Research Model

Based on the hypotheses established in this study, the following research model is presented (Figure 1).

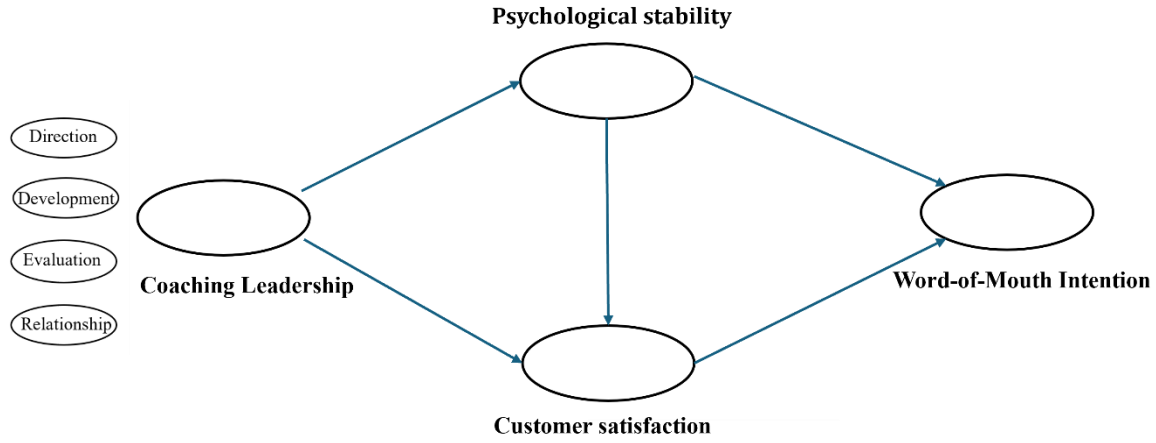

Figure 1: Research Model

3. Research Methods

3.1. Data Collection and Sample Characteristics

This study conducted a survey of 306 adult patients who had experience using primary care institutions (neighborhood clinics). The sample was selected through stratified sampling considering gender, age, and region from a professional online panel agency. The survey targeted adults who had visited primary care institutions within the last six months, and the sample's demographic characteristics showed similar patterns to the National Health Insurance Service (2022) statistics (χ^2=1.87, p>.05). The survey was conducted for about four weeks from September to October 2023.

The sample consisted of 306 patients who had visited primary care institutions. Demographic analysis revealed a balanced gender distribution with 152 males (49.7%) and 154 females (50.3%). Age distribution showed representation across all adult age groups, with the largest proportion in their 40s (27.8%, n=85), followed by those in their 30s (25.5%, n=78), 50s (20.2%, n=62), 20s (14.1%, n=43), and 60s and above (12.4%, n=38).

Regarding hospital utilization patterns, the majority of respondents (71.2%, n=218) reported using primary care services only when symptoms were present, while 23.9% (n=73) visited regularly for chronic disease management, and 4.9% (n=15) used primary care institutions regularly for health check-ups.

3.2. Measurement Instruments

All measurement instruments were translated from the original tools into Korean, then back-translated by English-Korean bilingual users to ensure meaning consistency. They were appropriately modified for the Korean healthcare environment through content validity verification (CVI=.87) by two healthcare management professors and one clinical physician. Specifically, Stowell's (1986) coaching leadership scale was adapted with behaviorally-oriented items such as "My physician clearly explains the direction of treatment" to enhance applicability in medical service contexts. All items were measured on a 7-point Likert scale.

Coaching leadership was measured using Stowell's (1986) scale, adapted to the healthcare context, with 20 items across four dimensions: direction provision, capacity development, performance evaluation, and relationship building (5 items each). Sample items include "My physician clearly explains the direction of treatment" (direction provision), "My physician helps me develop health management skills" (capacity development), "My physician provides specific feedback on my health status" (performance evaluation), and "My physician builds a trusting relationship with me" (relationship building).

Psychological safety was measured using Edmondson's (1999) 7-item psychological safety scale, adapted to the healthcare service context. Sample items include "I feel comfortable sharing my health concerns with my physician" and "I am not afraid to ask questions about my treatment."

Customer satisfaction was measured using 4 items based on Oliver's (1997) and Zeithaml et al.'s (1996) scales. Sample items include "Overall, I am satisfied with the medical services provided by this physician" and "The medical services provided by this physician meet my expectations."

Word-of-mouth intention was measured using 6 items from Lee et al.'s (2014) scale. Sample items include "I

would recommend this physician to others" and "I would say positive things about this physician to others."

3.3. Common Method Bias Testing

Since this study collected data on both independent and dependent variables from the same respondents at the same time, common method bias could potentially threaten the validity of the findings. To assess whether common method bias was a concern, two different tests were conducted.

First, Harman's single-factor test was performed (Podsakoff et al., 2003). All items from all constructs were loaded into an exploratory factor analysis, and the unrotated solution was examined to determine whether a single factor would emerge or whether one general factor would account for the majority of the covariance among the measures. The results showed that the first factor explained only 34.7% of the total variance, which is below the threshold of 50%, suggesting that common method bias was not a substantial concern.

Second, the marker variable approach was employed (Lindell & Whitney, 2001). A theoretically unrelated variable was included in the model as a marker variable. The correlations between this marker variable and the study constructs were examined, and the impact of these correlations on the path coefficients in the structural model was assessed. The changes in path coefficients ($\Delta\beta$) were all less than 0.05, further confirming that common method bias was not a significant concern in this study.

3.4. Analysis Method

This study followed the following analysis procedures. First, descriptive statistics and correlation analysis of measurement items were performed. Second, multicollinearity issues among coaching leadership sub-factors were diagnosed. Third, a structural multilevel model (Hierarchical Component Model) was applied to address multicollinearity issues. Fourth, the measurement model and structural model were evaluated using PLS-SEM. Fifth, bootstrapping analysis was conducted to verify the hypothesized relationships. Sixth, multi-group analyses were performed to examine the moderating effects of frequency of healthcare utilization.

PLS-SEM was chosen as the analytical approach for several reasons. First, it is suitable for analyzing complex structural multilevel models. Second, it has fewer sample size constraints compared to covariance-based SEM. Third, it has less strict normality assumptions (Hair et al., 2017). SmartPLS 4.0 software was used for the analysis, with 5,000 bootstrap samples to test the statistical significance of the path coefficients.

Initial analysis results revealed multicollinearity among coaching leadership sub-factors with VIF values exceeding the threshold (5.0) (Direction-Capacity: 8.32, Capacity-Performance: 9.31, Performance-Relationship: 7.78). To address this issue, a structural multilevel model was applied, configuring coaching leadership as a second-order factor and direction provision, capacity development, evaluation, and relationship factors as first-order factors.

4. Research Results

4.1 Descriptive Statistics and Correlation Analysis

The descriptive statistics and correlations of the main variables are shown in Table 1. All variables showed adequate variance with means ranging from 4.84 to 5.19 on a 7-point scale, and standard deviations around 1.1 to 1.26. All correlations between constructs were positive and significant ($p<.01$), with values ranging from 0.68 to 0.85, providing preliminary support for the hypothesized relationships.

Table 1: Descriptive Statistics and Correlations of Main Variables (N=306)

Variable	Mean	SD	1	2	3	4	5	6	7
1. Direction	5.06	1.16	1.00						
2. Development	4.97	1.12	0.81**	1.00					
3. Evaluation	5.12	1.11	0.78**	0.84**	1.00				
4. Relationship	4.84	1.25	0.72**	0.75**	0.83**	1.00			
5. Psychological Safety	5.14	1.19	0.71**	0.68**	0.75**	0.82**	1.00		

Variable	Mean	SD	1	2	3	4	5	6	7
6. Customer Satisfaction	5.19	1.20	0.75**	0.72**	0.82**	0.81**	0.85**	1.00	
7. Word-of-Mouth Intention	4.93	1.26	0.76**	0.73**	0.76**	0.79**	0.80**	0.84**	1.00

**p < .01

4.2. Measurement Model Evaluation

The measurement model was evaluated using several criteria: indicator reliability, internal consistency reliability, convergent validity, and discriminant validity. For indicator reliability, all items had loadings above 0.70 on their respective constructs, indicating adequate reliability. For internal consistency reliability, all constructs had Cronbach's α and composite reliability (CR) values above 0.88, exceeding the recommended threshold of 0.70 (Hair et al., 2017).

For convergent validity, the average variance extracted (AVE) values for all constructs were above 0.68, exceeding the recommended threshold of 0.50 (Hair et al., 2017). For discriminant validity, the Fornell-Larcker criterion was examined, which requires that the square root of the AVE for each construct should be greater than its correlations with all other constructs. All constructs met this criterion, indicating adequate discriminant validity.

Table 2: Construct Reliability and Validity Indicators

Construct	Number of Items	Cronbach's α	CR	AVE
Coaching Leadership	5	0.903	0.928	0.720
Psychological Safety	7	0.944	0.955	0.753
Customer Satisfaction	4	0.945	0.960	0.859
Word-of-Mouth Intention	6	0.948	0.959	0.795

4.3. Structural Multilevel Model Application

To address the multicollinearity issues among coaching leadership sub-factors, a structural multilevel model was applied. Coaching leadership was modeled as a second-order construct with four first-order dimensions: direction provision, capacity development, performance evaluation, and relationship building. The results of the formative measurement model evaluation for the first-order factors are presented in Table 3.

Table 3: Formative Measurement Model Evaluation Results of First-Order Factors for Second-Order Factor (Coaching Leadership)

First-Order Factor	Outer Weight	Outer Loading	t-value	p-value	VIF
Direction	0.284	0.889	6.215	0.000	3.354
Development	0.185	0.855	3.954	0.000	4.483
Evaluation	0.312	0.923	6.547	0.000	4.876
Relationship	0.325	0.895	7.021	0.000	3.928

After applying the structural multilevel model, all first-order factors' outer weights were statistically significant, and all VIF values were below 5, resolving the multicollinearity issue.

4.4. Structural Model Evaluation

4.4.1. Path Coefficients and Hypothesis Testing Results

The structural model was evaluated based on the significance of path coefficients and the coefficient of determination (R^2). Bootstrapping with 5,000 samples

was used to test the statistical significance of path coefficients. The results of hypothesis testing through structural model analysis are shown in Table 4.

Table 4: Path Coefficients and Hypothesis Testing Results of the Structural Model

H	Path	Path Coefficient(β)	t-value	p-value	Hypothesis Testing
H1	Coaching Leadership → Psychological Safety	0.803	23.942	<.001	Supported
H2	Coaching Leadership → Customer Satisfaction	0.476	10.622	<.001	Supported
H3	Psychological Safety → Customer Satisfaction	0.377	10.476	<.001	Supported
H4	Psychological Safety → Word-of-Mouth Intention	0.356	6.018	<.001	Supported
H5	Customer Satisfaction → Word-of-Mouth Intention	0.578	9.865	<.001	Supported

The structural model analysis results showed that all direct paths were statistically significant, supporting hypotheses 1-5. Specifically, coaching leadership had significant positive effects on psychological safety (β=0.803, p<.001) and customer satisfaction (β=0.476, p<.001). Additionally, psychological safety had significant positive effects on customer satisfaction (β=0.377, p<.001) and word-of-mouth intention (β=0.356, p<.001), and customer satisfaction had a significant positive effect on word-of-mouth intention (β=0.578, p<.001).

Evaluating the explanatory power (R^2) of the structural model, coaching leadership explained 64.5% of the variance in psychological safety, coaching leadership and psychological safety explained 68.0% of the variance in customer satisfaction, and psychological safety and customer satisfaction explained 75.8% of the variance in word-of-mouth intention. All endogenous variables had Q^2 values greater than 0.3, confirming the model's predictive relevance.

4.4.2. Analysis of Coaching Leadership Sub-Factors' Influence

Further analysis was conducted to understand the differential effects of coaching leadership sub-factors on outcome variables. The relationship factor had the largest influence on psychological safety (β=0.550, p<.01), followed by direction provision (β=0.244, p<.01) and evaluation (β=0.164, p<.05). Evaluation had the largest influence on customer satisfaction (β=0.407, p<.01), followed by the relationship factor (β=0.384, p<.01) and direction provision (β=0.252, p<.01). The relationship factor had the largest influence on word-of-mouth intention (β=0.421, p<.01), followed by direction provision (β=0.361, p<.01).

Interestingly, the capacity development factor did not have significant effects on psychological safety and customer satisfaction in the overall sample. This may be due to the predominance of episodic healthcare users in the sample, for whom capacity development may be less relevant compared to direction provision or relationship factors.

The differential effects of coaching leadership sub-factors are closely related to the current state of Korean primary care. The strong effect of the relationship factor reflects the importance of trust and continuous relationships emphasized by Fan et al. (2005) and Platonova et al. (2008). Conversely, the non-significance of the capacity development factor relates to the sample composition where 71.2% were episodic healthcare users, suggesting that immediate relationship building and direction provision are more critical than long-term capacity development in single medical encounters.

4.4.3. Moderating Effect Analysis

To test hypothesis H6, which proposed that frequency of healthcare utilization moderates the relationship between coaching leadership and psychological safety, a multi-group analysis was conducted. The sample was divided into two groups: regular healthcare users (n=74, including patients who visited regularly for chronic disease management or health check-ups) and episodic healthcare users (n=218, including patients who visited only when symptoms were present).

The results showed a significant difference in the effect of coaching leadership on psychological safety between the two groups. For regular healthcare users, the effect was stronger (β=0.928, p<.001) compared to episodic healthcare users (β=0.887, p<.001), with the difference being statistically significant (Δβ=0.041, p<.05). This finding supports hypothesis H6, suggesting that the effectiveness of coaching leadership in enhancing psychological safety is

amplified for patients who interact with their physicians more regularly.

Table 5: Moderating Effect Analysis Results by Frequency of Healthcare Utilization

Path	Regular Users (n=74)	Episodic Users (n=218)	Difference (Δβ)	p-value
Coaching Leadership → Psychological Safety	0.928	0.887	0.041	<.05
Coaching Leadership → Customer Satisfaction	0.545	0.526	0.019	.378
Psychological Safety → Customer Satisfaction	0.480	0.463	0.017	.412
Psychological Safety → Word-of-Mouth Intention	0.370	0.352	0.018	.387
Customer Satisfaction → Word-of-Mouth Intention	0.589	0.574	0.015	.421

No significant moderating effects were found for the other paths in the model, suggesting that the moderating effect of healthcare utilization frequency is specific to the relationship between coaching leadership and psychological safety. This specificity aligns with theoretical expectations, as regular interactions provide more opportunities for coaching leadership to foster psychological safety through repeated trust-building experiences.

Figure 2 illustrates this moderation effect, showing the stronger relationship between coaching leadership and psychological safety for regular healthcare users compared to episodic users.

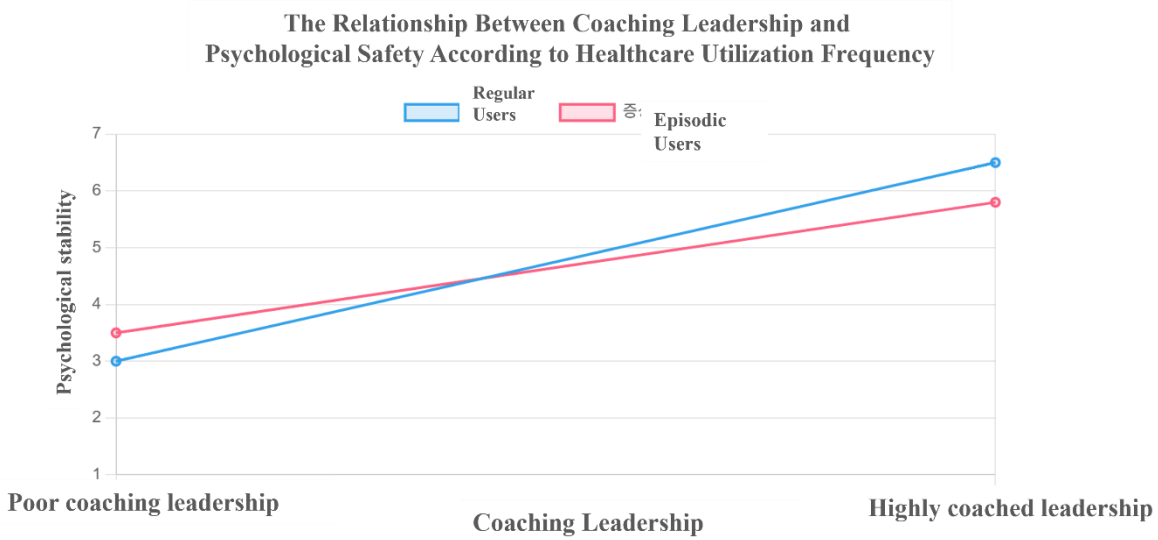

Figure 2: Moderation Effect of Healthcare Utilization Frequency]

To test hypotheses H7-H9 regarding the mediating effects, bootstrapping with 5,000 samples was conducted to estimate the indirect effects. The results of the mediation analysis are shown in Table 6.

Table 6: Indirect Effect Testing Results

Hypothesis	Indirect Path	Indirect Effect	t-value	p-value	Hypothesis Testing
H7	Coaching Leadership → Psychological Safety →	0.425	10.119	<.001	Supported

Hypothesis	Indirect Path	Indirect Effect	t-value	p-value	Hypothesis Testing
	Customer Satisfaction				
H8	Coaching Leadership → Customer Satisfaction → Word-of-Mouth Intention	0.308	8.324	<.001	Supported
H9	Coaching Leadership → Psychological Safety → Customer Satisfaction → Word-of-Mouth Intention	0.245	7.206	<.001	Supported

The mediation effect analysis results showed that all indirect paths were statistically significant, supporting hypotheses H7-H9. Psychological safety significantly mediated the relationship between coaching leadership and customer satisfaction (indirect effect=0.425, p<.001), and customer satisfaction significantly mediated the relationship between coaching leadership and word-of-mouth intention (indirect effect=0.308, p<.001). Additionally, psychological safety and customer satisfaction sequentially mediated the relationship between coaching leadership and word-of-mouth intention (indirect effect=0.245, p<.001).

To determine the type of mediation effect, the Variance Accounted For (VAF) value was calculated as proposed by Hair et al. (2017). VAF is calculated as: VAF = Indirect Effect / Total Effect (Indirect Effect + Direct Effect). According to Hair et al. (2017), VAF > 80% indicates full mediation, 20% ≤ VAF ≤ 80% indicates partial mediation, and VAF < 20% indicates no mediation.

Analysis of direct effects, indirect effects, and total effects showed that the VAF value for the mediating effect of psychological safety on the relationship between coaching leadership and customer satisfaction was 44.4%, indicating a partial mediating effect. Additionally, the influence of coaching leadership on word-of-mouth intention was fully mediated by psychological safety and customer satisfaction (VAF=100%).

The finding that the relationship between coaching leadership and word-of-mouth intention is fully mediated (VAF=100%) provides important theoretical implications. It suggests that physicians' coaching leadership does not directly influence patients' word-of-mouth intentions but must work through the experiential elements of patient well-being and satisfaction. This result extends Walker et al.'s (2008) research on "simultaneous changes between leadership change and customer satisfaction" by more clearly elucidating the mechanism through which leadership influences customer behavioral intentions.

The partial mediation effect (VAF=44.4%) of psychological safety in the relationship between coaching leadership and customer satisfaction indicates that coaching leadership affects patient satisfaction both directly and substantially through the well-being component of psychological safety. This empirically supports Fuertes et al.'s (2015) proposed mechanism that "collaborative physician-patient relationships enhance psychological safety, which improves treatment outcome expectations and satisfaction."

5. Discussion and Conclusion

5.1 Theoretical Implications

This study offers several important theoretical contributions to healthcare management and leadership literature. First, it extends coaching leadership theory to the healthcare context, particularly primary care settings, by empirically validating the positive effects of physicians' coaching leadership on patient outcomes. This contribution is significant because it bridges the gap between leadership theories predominantly developed in organizational settings and the unique demands of healthcare environments where relationships are characterized by information asymmetry and vulnerability.

Second, this study elucidates the mechanism through which coaching leadership influences service outcomes, specifically word-of-mouth intention. By identifying the sequential mediating roles of psychological safety and customer satisfaction, the study provides a more nuanced understanding of how leadership behaviors translate into tangible service outcomes. This finding extends Walker et al.'s (2008) research on "simultaneous changes between leadership change and customer satisfaction" by more clearly explaining the psychological processes that link leadership behaviors to customer behavioral intentions.

Third, the application of a structural multilevel model to address multicollinearity issues among coaching leadership sub-factors represents a methodological contribution that can inform future research on

multidimensional leadership constructs. By demonstrating how second-order modeling can resolve multicollinearity while preserving the theoretical integrity of leadership dimensions, this study offers a valuable template for researchers facing similar analytical challenges.

Fourth, the identification of frequency of healthcare utilization as a significant moderator of the relationship between coaching leadership and psychological safety contributes to contingency perspectives on leadership effectiveness. This finding supports Bass and Riggio's (2006) assertion that "leadership effects interact with context" and extends this principle to healthcare settings, where the nature and frequency of physician-patient interactions may condition leadership effectiveness.

Fifth, the differential effects of coaching leadership sub-factors on outcome variables suggest the need for a more contextualized understanding of coaching leadership in healthcare settings. The finding that the relationship factor and direction provision consistently demonstrated strong effects, while capacity development showed limited significance, indicates that the relevance of different leadership dimensions may vary depending on the healthcare context and patient characteristics.

5.2. Practical Implications

This study provides specific guidelines for implementing coaching leadership in primary care institutions. First, as emphasized by Henochowicz and Hetherington (2006), physician education focusing on relationship building and direction provision competencies should be prioritized with organizational support. Second, considering the moderating effect of healthcare utilization frequency, comprehensive coaching approaches should be applied to regular visitors, while efficient interactions centered on relationship building should be used for episodic visitors. Third, for implementing the government's "Primary Care Strengthening Roadmap," coaching leadership-related indicators should be included in healthcare institution evaluation systems, and incentive systems for excellent relationship performance, as proposed by Gallagher and Levinson (2004), should be established.

Based on the differential effects of coaching leadership sub-factors, primary care institutions should prioritize training programs that focus on building relationship skills and direction provision competencies, as these had the most consistent effects across outcomes. Specifically, physicians should be trained in active listening, expressing empathy, clearly communicating treatment plans, and establishing trust with patients.

The significant moderating effect of healthcare utilization frequency on the relationship between coaching leadership and psychological safety suggests the need for differentiated approaches based on patient characteristics. For patients with chronic conditions who visit regularly, physicians should invest more heavily in relationship building and coaching interactions, as these patients are particularly responsive to coaching leadership behaviors.

For healthcare policy makers, this study provides empirical support for the importance of relational aspects of care in achieving the objectives of the "Primary Care Strengthening Roadmap." Policy initiatives should include measures to evaluate and incentivize coaching leadership behaviors among primary care physicians, potentially through the inclusion of coaching leadership-related items in quality evaluation indicators.

5.3. Limitations and Future Research Directions

This study has several key limitations. First, the cross-sectional design constrains causal inference, preventing examination of the longitudinal change processes in trust and preventive service acceptance according to physician-patient relationship duration as presented by Lee et al. (2013). Second, the sample composition centered on episodic healthcare users (71.2%) limited sufficient validation of the capacity development factor's effects.

Future research should analyze the longitudinal impact of physician turnover on patient experiences as in Reddy et al.'s (2015) study, and explore the relationship between patient-centered decision-making and health outcomes as presented by Weiner et al. (2013) within the coaching leadership context. Additionally, like Takeuchi et al.'s (2011) patient-reported outcomes research, investigation into digital healthcare applications of coaching leadership is needed

Second, while common method bias testing suggested it was not a substantial concern, the reliance on self-reported data from patients may still introduce some biases. Future studies could employ multi-source data, collecting information from both patients and physicians, to provide a more comprehensive picture of coaching leadership dynamics.

Third, the sample was primarily composed of episodic healthcare users (71.2%), which may have influenced the non-significance of the capacity development factor. Future research should specifically target patients with chronic conditions who engage in regular healthcare interactions to better understand how capacity development functions in ongoing physician-patient relationships.

Fourth, this study focused on primary care settings in

Korea, potentially limiting the generalizability of findings to other healthcare contexts or cultural settings. Cross-cultural comparisons would be valuable to understand how cultural factors might influence the effectiveness of coaching leadership in healthcare environments.

Fifth, future research could explore additional moderators and boundary conditions for coaching leadership effectiveness, such as patients' health literacy, self-efficacy, or disease severity. Understanding these contingencies would further enhance the contextualized application of coaching leadership in healthcare management.

Sixth, as healthcare increasingly incorporates digital delivery channels, research should investigate how coaching leadership principles translate to telehealth and digital healthcare environments. Studies comparing coaching leadership effectiveness across face-to-face and virtual interactions would provide valuable insights for healthcare delivery in the digital age.

5.4. Conclusion

This study contributes to healthcare management literature by empirically validating the importance of coaching leadership in physician-patient relationships and identifying the mechanisms through which it enhances patient well-being and service outcomes. The findings highlight the significance of psychological safety as a key component of patient well-being and an important mediator of leadership effects on satisfaction and word-of-mouth intention.

The moderating effect of healthcare utilization frequency underscores the contextual nature of leadership effectiveness in healthcare settings, suggesting that coaching leadership may be particularly valuable for managing relationships with patients who require ongoing care. This insight has important implications for primary care management practices and the implementation of patient-centered care initiatives.

By demonstrating that strengthening physician-patient relationships through coaching leadership creates a virtuous cycle of enhancing patient well-being and improving service outcomes, this study emphasizes the importance of a balanced approach to healthcare management that considers both the quality of care experiences and organizational performance metrics.

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