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The Effect of Healthcare Managers' Perceptions of Top Management Team Behavioral Integration on Strategic Change and Innovative Performance

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Abstract

Background: Healthcare organizations should constantly update their strategies, follow sectoral trends, provide continuous training and development opportunities to their employees, and create an environment conducive to innovation in order to adapt quickly to changes and gain competitive advantage.

Purpose: The purpose of this study is to reveal the impact of senior managers' perceptions of the behavioral integration of the top management team on their perceptions of strategic change and innovative performance.

Study design/methodology/approach: The study analyzed information obtained from senior managers of 321 private hospitals in Turkey. Multiple regression analysis was used to test the research hypotheses.

Findings/conclusions: The results show that innovative performance is significantly enhanced by collaborative behavior, a sub-dimension of behavioral integration of the top management team. Moreover, another sub-dimension, joint decision making, has a negative effect on the initiation of strategic change, while collaborate behavior has a good effect on the execution of change. On the other hand, strategic change execution is negatively affected by joint decision making. The success of strategic change initiatives and the competitive advantage of the organization may be negatively affected. The influence of some cultural factors on business practices can create resistance to change and make it difficult for the top management team to work together. Overcoming this resistance requires cultural transformation and leadership development efforts within the organization.

Limitations/future research: The study focuses only on the health sector. Further research can focus on other sectors with qualitative study methods.

Keywords: Strategic Change, Innovative Performance, Top Management Team, Behavioral Integration, Healthcare Organization

Introduction

Within the health sector, health institutions are leading among capital, technology, labor and knowledge intensive enterprises. Health institutions have an important position in the health system of most countries. Since health institutions exist in both the public and private sectors, they need a well-planned and efficient administrative structure. For this purpose, most health care organizations have their own board of directors and a professional top management team (TMT) consisting of senior managers. Vainieri et al. (2019) describe healthcare organizations as complex, adaptive systems characterized by diverse organizational structures, numerous vertical and horizontal connections, and a combination of formal control mechanisms with considerable individual professional autonomy and influence. For this reason, teamwork in healthcare

organizations has various challenges. Formal team roles define the expectations for tasks, collaboration techniques, and partnerships. However, individual interactions with colleagues are also heavily influenced by personal affinities, preferences, past relationships, expertise, and professional rivalries (Kisfalvi et al., 2016). Carmeli (2008) demonstrated the importance of top management team behavioral integration (TMTBI) for various organizational outcomes of service businesses. The results of the study show that a behaviorally integrated team, whose members find ways to improve their mutual and collaborative interactions, exhibits better human resource performance and economic success than a less behaviorally integrated team.

As today's business environment becomes more dynamic, many organizations face unpredictable challenges in both their external and internal environments. To sustain their operations, organizations must stay updated in line with environmental conditions. For this reason, understanding the impact of the top management team on strategic change and innovative performance is crucial for both researchers and managers.

The dynamics of the market in which healthcare organizations operate and the specific characteristics of their economic management model led to a high degree of complexity in their structure and management. In recent years, increasing regulatory environmental pressures, technological advances, financial constraints and demand for high quality healthcare services have made strategic change in healthcare organizations inevitable. The impact of strategic change and innovative performance on TMTBI is of significant relevance in the context of private hospital management. Strengthening the links between these concepts and evaluating these elements can contribute to private hospitals to achieve a sustainable competitive advantage. Strategic change, innovative performance and TMTBI constitute the key components of a successful management strategy. In this context, it is important to initiate and implement strategic changes in hospitals with the contributions of senior management and to evaluate their level of innovation.

The study's design is influenced by the incomplete understanding of how TMTBI impacts strategic change and innovative performance in healthcare organizations, as well as the contradictory findings reported in the existing literature. In this context, the aim of the study is to reveal the effect of TMTBI perceptions of senior managers working in private hospitals on their perceptions of innovative performance and strategic change.

For the reasons explained, the research questions were formulated as follows:

1. Is there an effect of TMTBI perceptions of senior managers working in private hospitals on their perceptions of strategic change?

2.Is there an effect of TMTBI perceptions of senior managers working in private hospitals on their perceptions of innovative performance?

1. Literature Review

Most of the research in the literature have employed the upper echelon theory to examine the demographic traits of managers and how they affect decision outcomes in industries other than the health sector (Hambrick & Mason, 1984). Healthcare has a different perspective on top management teams due to its specific structure and unique characteristics. In health care, the TMT is usually composed of both physicians and professional managers. Diversity in senior management teams provides members with different professional perspectives, types of knowledge and decision-making styles. This results in more innovative ideas and greater creativity in the development of situation strategies (Naranjo-Gil, 2015). Thus, to stay competitive in the healthcare sector, it is critical to consider both financial sustainability and quality of care (Parayitam et al., 2007). However, since the perspectives of physicians and professional managers are potentially completely opposite, disagreements may arise among team members trying to establish a careful balance. Physician managers focus on providing high-quality care, leveraging the advantage of their medical background, while administrative managers aim to make financially sustainable strategic decisions. Therefore, strong integration within the team is essential for making better-quality decisions.

Many scholars, building on the work of Hambrick and Mason (1984), have emphasized the crucial role that senior managers play in driving strategic change and making key decisions. Researchers have explored the connection between top management teams and strategic change from various perspectives. Several studies have shown how TMT demographic characteristics (gender, age, tenure, education and experience) shape the cognitive orientations, attitudes and perspectives of

TMT members and how these characteristics can lead to change in strategic decision-making processes (Kelly et al., 2000; Yang & Wang, 2014). Similarly, several studies have demonstrated the impact of top management on strategy execution (Schaap, 2006; Maditinos et al., 2014; Hazarbassanova, 2016). In his work, Okumuş (2003) highlighted the importance of managers' roles in the implementation process and stressed the need for them to have the training they need to implement their best initiatives. Schmidt and Brauer (2006) emphasized that the dynamics within the top management team are shaped by the organization's goals and strategies, and these dynamics play a vital role in the effective execution of the selected strategy. Schaap (2006) postulated that successful strategy implementation would be directly correlated with effective senior leadership behaviors. The study indicated that senior leaders with expertise or experience in strategic planning and implementation are more likely to achieve the organization's performance objectives. The hypotheses established within this scope are as follows:

H_1: The evaluations made by hospital managers regarding the behavioral integration dimensions of the top management team impact their perceptions of strategic change

H_{1a}: The perception of information change significantly affects the initiation of strategic change.

H_{1b}: The perception of collaborative behavior significantly affects the initiation of strategic change.

H_{1c}: The perception of joint decision-making significantly affects the initiation of strategic change.

H_{1d}: The perception of information exchange significantly affects the implementation of strategic change.

H_{1e}: The perception of collaborative behavior significantly affects the implementation of strategic change.

H_{1f}: The perception of joint decision-making significantly affects the implementation of strategic change.

Effective innovation in healthcare relies significantly on strong senior leadership. Leaders who promote an entrepreneurial mindset and support innovative business strategies play a crucial role in improving innovation outcomes (Bagheri et al., 2022; Bocken & Geradts, 2020). In this context, leadership that supports innovation is crucial for improving quality, productivity, and efficiency (Dalton et al., 2021). Avby et al. (2019) revealed that innovation is significantly influenced by entrepreneurial leadership, team collaboration, strict performance standards, and a culture focused on learning. Effective leadership models enable healthcare organizations to create new products and services tailored to the evolving healthcare landscape, enter new markets, expand market share, gain competitive advantages, and develop innovative business models (Bocken & Geradts, 2020). Therefore, innovative performance can be enhanced through innovative business behaviors, leadership practices and an effective senior management team. However, the influence and orientation of senior managers may differ due to both demographics and the composition of the team (Wally & Becerra, 2001). Research shows that TMT diversity and level of education are often seen as characteristics that support an innovation-oriented mindset (Kor, 2006). For example, regarding the educational level of TMT, some studies have shown that educational level positively affects innovative capacity (Camelo et al., 2010; Herrmann & Datta, 2005). Research on family businesses demonstrates that sources of TMT diversity unique to family businesses, such as the number of family members working for the company, the number of generations employed, and the generation in charge of the business, have an impact on overall business performance and, consequently, innovation performance (Calantone et al., 2003; Rosenbusch et al., 2011).

The health sector is changing rapidly and organizations that can keep pace with this change and even lead it gain competitive advantage. Strategic change and innovation play an important role in enabling organizations to gain flexibility, seize new opportunities and achieve sustainable success in this dynamic environment. However, it is critical that the top management team exhibits consistent behavior in the process of change and innovation and that this behavior is spread to the entire organization. At this point, the relationship between strategic change and innovative performance and top management team behavioral integration constitutes one of the cornerstones of organizational success. In this context, this relationship determines the organization's ability to cope not only with its internal dynamics but also with external environmental factors. TMTBI is an important factor determining the way healthcare organizations manage change processes and have an impact on innovative performance and strategic change. While strategic change draws a roadmap

towards the organization's goals, innovative performance provides the flexibility and creativity needed to achieve these goals. In this context, to be successful in strategic change, organizations need to adopt a culture and top management team that fosters innovative performance. The hypotheses established within this scope are as follows:

H_2: Hospital managers' evaluations of the dimensions of TMTBI influence their perceptions of innovative performance.

H_{2a}: Perceptions of information exchange significantly affect innovative performance.

H_{2b}: Perceptions of collaborative behavior significantly affect innovative performance.

H_{2c}: Perceptions of joint decision making significantly affect innovative performance.

2.Methodology

2.1. Data Collection Instruments

In the study, a questionnaire form was utilized as a data collection tool. The survey form used within the scope of the research is provided in the appendix. Four parts make up the questionnaire. The first part of the questionnaire form consists of 9 questions that determine the individual characteristics of the managers such as age, gender, educational status, position and working time in the institution and the organizational characteristics of the hospitals they work in such as field of activity, number of beds, number of employees and year of establishment.

The Strategic Change Scale, created by Herrmann and Nadkarni (2014), was employed in the second section to gauge managers' opinions regarding strategic change. The scale comprises 10 statements total, 5 statements per dimension, and is composed of two sub-dimensions: implementation of strategic change and initiation of strategic change. The Likert scale used for the study has five points, ranging from 1 (no change at all) to 5 (severe change). After assessing the scale's validity and reliability, the Cronbach's alpha value was found to be 0.85. The strategic change scale's Cronbach's alpha value in this investigation was determined to be 0.84.

The Innovative Performance Scale, created by Sicotte et al. (2014), was employed in the third segment to gauge managers' opinions of innovative performance. There are eight one-dimensional items and five points on the Likert-type scale. From 1 (strongly disagree) to 5 (strongly approve), the scale is rated. After the scale's validity and reliability were examined, a Cronbach's alpha value of 0.88 was determined. In this study, the Cronbach's alpha value for the innovative performance scale was determined to be 0.96.

The integration of managers into the top management team was assessed in the final section using the Top Management Team Behavioral Integration Scale, which was created by Simsek et al. (2005). The three sub-dimensions of the scale are cooperative conduct, information sharing, and group decision making. There are three statements for each dimension, for a total of nine statements. The scale has a range of 1 (strongly disagree) to 5 (strongly agree), based on a Likert-type scale. After the scale's validity and reliability were examined, a Cronbach's alpha value of 0.80 was determined. In this study, the Cronbach's alpha value of the TMTBI scale is 0.86.

2.2. Study Population

The research covers 566 senior managers of private hospitals in Turkey (Sağlık Bakanlığı, 2019). The research aimed to encompass the entire population rather than select a sample. In each hospital, it was aimed to reach one of the general manager, chief physician or hospital director serving on the board of directors. In this context, all private hospital senior managers in the universe were tried to be reached face to face. After the questionnaire form was created, the managers were contacted, and the questionnaire forms were sent individually by mail to the managers who voluntarily accepted to participate in the study. The researcher asked the managers for their commitment to complete and return the questionnaire forms. The study was conducted with the participation of 321 private hospital senior managers. The participation rate was calculated as 56.71% with the collected questionnaires.

Table 1 Distribution of Hospitals and Collected Questionnaires by Geographical Regions

Regions	Private Hospital		Surveyed Private Hospitals	
	n	%	n	%
Mediterranean	88	15.55	46	14.33
Eastern Anatolia	21	3.71	12	3.74
Southeast Anatolia	46	8.13	28	8.72
Aegean	71	12.54	41	12.75
Marmara	236	41.70	130	40.50
Black Sea	31	5.48	20	6.23
Central Anatolia	73	12.89	44	13.70
Total	566	100	321	100

Source: the authors

Table 1 shows that responses were received from every region and the distribution of managers across regions was very close. The Mediterranean Region is where 15.55% of all private hospitals are located, and 14.33% of the managers participating in the study work in hospitals that operate there. While 41.70% of the private hospitals constituting the research population are in the Marmara Region, 40.50% of the managers participating in the research work in hospitals operating in the Marmara Region. In this regard, the fact that the distribution of the hospitals in which the hospital executives reached because of the research according to the geographical regions of the hospitals where they work is close to the distribution in the universe suggests that the research has a good representation power of the universe.

2.3. Statistical Analysis

After transferring the collected data to the computer environment, the SPSS-23 software program was utilized for data analysis. To assess the reliability of the scales, the internal consistency coefficient (Cronbach's Alpha) was computed. Frequency, percentage, mean, and standard deviation values were used to determine descriptive findings about the organizational and individual characteristics of managers and their responses to the scales measuring innovative performance, strategic change and TMTBI. To determine if the data on TMTBI, innovative performance, and strategic change factors followed a normal distribution, skewness and kurtosis coefficients were analyzed. Hahs-Vaughn and Lomax (2020) state that acceptable ranges for skewness and kurtosis values for a normal distribution are -2 to +2.

Multiple regression analysis was used to examine the research hypotheses to determine how TMTBI affected innovative performance and strategic change. To investigate the existence of multicollinearity and autocorrelation in the regression models, the Durbin-Watson coefficient and Variance Inflation Factor (VIF) were calculated. The significance level of 0.05 was used for all statistical analyses.

3.Results

3.1. Descriptive Findings

Table 2 displays the distribution of the findings related to the individual characteristics of senior managers participating in the study. In this context, 34.3% of the managers participating in the research are female, while 65.7% are male. 29.9% of the participants were 40 years old or younger, 25.9% were 36-40 years old, 29.6% were 41-45 years old, 25.9% were 46-50 years old and 14.6% were 51 years old or older. Of the managers participating in the study, 16.2% had an associate's degree, 37.7% had a bachelor's degree, 31.5% had a master's degree, and 14.6% had a doctorate degree. Additionally, the organizational characteristics of the hospitals where the senior managers participating in the study work are as follows: According to the field of activity of the hospitals where the executives in the scope of the research work, 36.8% are regional, 19.3% are national and 43.9% are national and international. Of the hospitals in the study, 15.32% have 50 or less beds, 40.2% have 51-100 beds, 26.5% have 101-150 beds, and 18.1% have 151 or more beds.

Table 2 Individual Characteristics of Managers and Organizational Characteristics of the Hospitals They Work In

Individual Characteristics		**Number**	**Percentage**
Gender	Female	110	34.3
	Male	211	65.7
Age	≤40	96	29.9
	41-45	95	29.6
	46-50	83	25.9
	≥51	47	14.6
Education Level	Associate degree	52	16.2
	Undergraduate	121	37.7
	Master's Degree	101	31.5
	PhD	47	14.6
Managerial Position	Chief Physician	113	35.2
	Hospital Director	175	54.5
	General Director	33	10.3
Total Working Time	≤15	55	17.1
	16-20	108	33.6
	21-25	93	29.0
	≥26	65	20.2
Organizational Characteristics			
Hospital Activity Area	Regional	118	36.8
	National	62	19.3
	National and International	141	43.9
Number of Hospital Beds	≤50	49	15.3
	51-100	129	40.2
	101-150	85	26.5
	≥151	58	18.1
Number of Hospital Employees	≤200	145	45.2
	201-300	71	22.1
	301-400	42	13.1
	≥401	63	19.6
Year of Hospital Establishment	≤2000 Year	75	23.4
	2001-2010 Year	139	43.3
	≥2011 Year	107	33.3

Source: the authors

Table 3 presents the descriptive findings showing the mean, standard deviation and the relationships between these variables regarding the statements in the strategic change, innovative performance and TMTBI scales used in the research. In this context, the average score for participants' responses to the initiation of strategic change, derived from the sub-dimensions of the strategic change scale, was computed as 3.42 with a standard deviation of 0.76. The average score for participants' responses to the implementation of strategic change was determined to be 2.82 with a standard deviation of 0.96. Given the obtained findings, the managers perceptions of the initiation of strategic change are above the medium level, while their perceptions of the implementation of strategic change are at the medium level. The mean score for the responses provided by the managers on the innovative performance scale was found to be 3.72, with a standard deviation of 0.97. These findings indicate that managers' perceptions of innovative performance are above average. The average score for managers' responses to the information exchange sub-dimension of the TMTBI scale was 3.59 with a standard deviation of 0.88. For collaborative behavior, the average score was 3.34 with a standard deviation of 0.87, and for joint decision-making, the mean score was 3.40 with a standard deviation of 0.86. These findings suggest that managers' perceptions of TMTBI are above average.

Table 3 Managers' Responses: Mean, Standard Deviation and Correlation Values

	Mean	SD	(1)	(2)	(3)	(4)	(5)	(6)
Initiation of Strategic Change	*3.427*	*0.766*						
Implementing Strategic Change	*2.821*	*0.961*	**.373****					
Innovative Performance	*3.721*	*0.972*	-.081	**.270****				
Information Exchange	*3.592*	*0.888*	-.034	-.022	.031			
Collaborative Behavior	*3.347*	*0.877*	-.104	.106	**.187****	**.438****		
Joint Decision Making	*3.405*	*0.860*	**-.221****	-.099	.041	**.537****	**.437****	

*** p<0,01 *, p<0,05 ; SD (Standard Deviation); Initiation of Strategic Change (1); Implementing Strategic Change (2); Innovative Performance (3); Information Exchange (4); Collaborative Behavior (5); Joint Decision Making (6)*

Source: the authors

To examine the relationships between variables, correlation analysis was performed in the research. The findings indicate a low positive correlation ($r=0.270$, $p<0.001$) between innovative performance and the implementation of strategic change. Additionally, a low positive correlation ($r=0.187$, $p<0.001$) was observed between collaborative behavior and innovative performance. In contrast, a significant negative correlation ($r=-0.221$, $p<0.001$) was identified between joint decision-making and the initiation of strategic change.

3.2. Findings About Regression Analysis

Table 4 displays the results of the regression analysis performed to evaluate the influence of TMTBI sub-dimensions on the initiation of strategic change. The model is significant and valid, according to statistical calculations ($F=6.752$, $p<0.05$). To assess multicollinearity, VIF and Durbin Watson coefficients were scrutinized. Typically, the Durbin Watson value should fall between 0 and 4, while the VIF value should be 10 or less (Altunışık et al., 2007). Based on the analysis results, VIF and Durbin-Watson values indicate that there is no problem with autocorrelation. Moreover, the model shows that TMTBI explains about 6% of the total variance in strategic change initiation. Analysis of the t-test results for the regression coefficient reveals that the statistically significant effect is associated with the joint decision-making dimension. Specifically, an increase in managers' perceptions of joint decision making corresponds to a statistically significant decrease in their perceptions of the initiation of strategic change ($t=-4.067$, $p<0.05$). Within the context of these findings, hypothesis H_{1c}, which posits that joint decision making among the sub-dimensions of TMTBI in hypothesis H_1 has a statistically significant effect on the initiation of strategic change, is accepted. Conversely, hypotheses H_{1a} and H_{1b}, which predict that information exchange and collaborate behavior, respectively, have a significant effect on the initiation of strategic change, are rejected.

Table 4 The Effect of Top Management Team Behavioral Integration Dimensions on the Strategy Initiation Dimension of Strategic Change

Variables	B	SE	β	t	p	VIF
Constant	3.973	0.208		19.055	<0.001	
Information Exchange	0.112	0.058	0.130	1.944	0.053	1.513
Collaborative Behavior	-0.037	0.055	-0.042	-0.672	0.502	1.332
Joint Decision Making	-0.242	0.060	-0.272	-4.067	<0.001	1.511
R=0.245	*R^2=0.060*	*F=6.752*	*p<0.001*	*Durbin Watson=1.645*		

Note: B (Beta Coefficient); SE (Standard Error); β (Beta Standardized Coefficient); t (t-value); p (p-value); VIF (Variance Inflation Factor)

Source: the authors

Table 5 presents the findings of the regression analysis conducted to determine the effect of TMTBI sub-dimensions on strategy implementation. The established model is significant and valid, according to statistical estimations ($F=4.106$, $p<0.05$). Furthermore, the VIF and Durbin Watson values indicate no issues concerning autocorrelation. According to the model, TMTBI explains about 3.7% of the total variance in strategic change implementation. Analysis of the t-test results for the regression coefficient indicates that statistically significant effects are present in the dimensions of collaborative behavior ($t=2.941$, $p<0.05$) and joint decision-making ($t=-2.591$, $p<0.05$). Accordingly, an increase in managers' perceptions of collaborate

behavior statistically enhances their perceptions of the implementation of strategic change. Conversely, an increase in their perceptions of joint decision making statistically decreases their perceptions of the implementation of strategic change. Hypotheses H_{1e} and H_{1f}, which state that cooperative behavior and joint decision making among the TMTBI sub-dimensions in hypothesis H_1 have a major impact on the implementation of strategic change, are accepted in light of these findings. On the other hand, hypothesis H_{1d} is not supported, indicating that information exchange amongst the behavioral integration sub-dimensions of the top management team has a major impact on the execution of strategic transformation.

Table 5 The Effect of Top Management Team Behavioral Integration Dimensions on the Implementation of Strategic Change

Variables	B	SE	*β*	t	p	VIF
Constant	2.839	0.265		10.720	<0.001	
Information Exchange	-0.010	0.073	-0.009	-0.139	0.890	1.513
Collaborative Behavior	0.205	0.070	0.187	2.941	0.004	1.332
Joint Decision Making	-0.196	0.076	-0.176	-2.591	0.010	1.511

R=0.193 R^2=0.037 F=4.106 p=0.007 Durbin Watson=1.578

Note: B (Beta Coefficient); SE (Standard Error); β (Beta Standardized Coefficient); t (t-value); p (p-value); VIF (Variance Inflation Factor)

Source: the authors

Table 6 shows the results of the regression analysis to determine the impact of TMTBI sub-dimensions on innovative performance. In this context, statistical estimations of the established model reveal that the model is significant and usable (F=4.246, p<0.05). In addition, VIF and Durbin Watson values show that there is no problem in terms of autocorrelation. According to the model, TMTBI explains about 3.9% of the total variance in innovative performance. Reviewing the t-test results for the regression coefficient reveals that the statistically significant effect is observed in the dimension of collaborative behavior. Accordingly, the increase in managers perceptions of collaborate behavior statistically increases their perceptions of innovative performance (t=3.486, p<0.05). Based on these findings, hypothesis H_{2b}, which asserts that collaborative behavior among the TMTBI sub-dimensions significantly affects innovative performance, is supported. In contrast, hypotheses H_{2a} and H_{2c}, which propose that information exchange and joint decision-making among the TMTBI sub-dimensions significantly impact innovative performance, are not supported.

Table 6 The Effect of Top Management Team Behavioral Integration Dimensions on Innovative Performance

Variables	B	SE	β	t	p	VIF
Constant	3.209	0.268		11.994	<0.001	
Information Exchange	-0.056	0.074	-0.051	-0.751	0.453	1.513
Collaborative Behavior	0.246	0.070	0.222	3.486	<0.001	1.332
Joint Decision Making	-0.032	0.077	-0.029	-0.424	0.672	1.511

R=0.197 R^2=0.039 F=4.246 p=0.006 Durbin Watson=1.782

Note: B (Beta Coefficient); SE (Standard Error); β (Beta Standardized Coefficient); t (t-value); p (p-value); VIF (Variance Inflation Factor)

Source: the authors

4. Discussion

The aim of the study is to reveal the effect of TMTBI perceptions of senior managers working in private hospitals on their perceptions of innovative performance and strategic change.

The study's findings indicate that the joint decision-making sub-dimension of TMTBI has a statistically significant negative effect on the initiation of strategic change. In the literature, there is no study on the impact of TMTBI on strategic change in the health sector. Although they are different concepts, a study revealed that extraverted personality traits of senior executives are negatively correlated with the joint decision-making dimension of the TMTBI (Grant et al., 2011). In another experimental study, it was concluded that groups under stress are less likely to utilize the resources of their members, leading to lower quality decision making (Kerr & Tindale, 2004). On the other hand, some studies have shown that diversity in management causes conflicts and negatively affects strategic change (Nielsen, 2010).

However, some research indicate that top management teams with greater diversity may experience slower decision-making, challenges in reaching consensus, and difficulties in initiating strategic change (Knight et al., 1999). Therefore, if the top management team is under stress and pressure, it will have a negative impact on the team in making the decision to initiate strategic change. Moreover, the different attitudes, personal backgrounds, worldviews, social connections, beliefs and experiences of the members of the senior management team can complicate the joint decision-making process. The results obtained in this context are regarded as significant contributions to the existing literature.

Another finding indicates that the sub-dimension of TMTBI, namely collaborative behavior, has a statistically significant positive effect on the implementation of strategic change. In contrast, joint decision-making is found to have a statistically significant negative impact on the implementation of strategic change. In the literature, there is no study on the impact of TMTBI on strategic change in the health sector. However, some studies have revealed that the demographic characteristics of the top management team can shape the cognitive orientations, attitudes, and opinions of team members and influence their strategic decisions leading to change (Kelly et al., 2000; Yang & Wang, 2014). The relationship between these variables and TMTBI is thought to indirectly influence strategic change in organizations. Similarly, studies have shown that top management has a positive impact on strategy implementation. The study's findings align with existing literature, except for the observation that joint decision-making negatively affects the implementation of strategic change, which contradicts previous research. To enhance the quality of decision-making, fostering collaboration, joint decision-making, and information sharing between managers and board members is essential (Uhlaner et al., 2021). In other words, a high level of TMTBI may mean that the strategic change outcomes of the organization will also be high. In the literature, shared decision-making behavior is generally accepted to have positive effects on strategic change (Wu, 2018). However, if the opinions of each member of the senior management team are not taken separately in making strategic decisions, the team members may not show the expected cohesion in the implementation of the strategic decisions. It has been shown that the lack of interaction between the senior management team members may result in the failure of the strategic implementation phase when they do not know what kind of strategy implementation they will take part in due to their different understandings of the strategic plan (Sminia, 2005). Different views and interests can lead to disagreements and conflicts in joint decision-making processes. These conflicts can complicate the implementation of strategic changes and disrupt team cohesion. Thus, the negative impact obtained as a result of the study may be due to these reasons.

According to another finding of the study, shared behavior, one of the sub-dimensions of TMTBI, has a statistically significant and positive effect on innovative performance. In the literature, there is no study in the health sector that examines the effect of senior managers perceptions of senior management team behavioral integration on their perceptions of innovative performance. A study on new product development teams in the technology sector in China revealed the positive impact of information exchange and collaborate behavior on innovative performance (Liu et al., 2015). In some studies, conducted with different concepts, positive relationships between TMTBI and exploratory innovation, green innovation and innovative consensus were determined (Hoegl & Proserpio, 2004; Hashmi et al., 2023). The study by Afshar Jahanshahi and Brem (2017) found a positive relationship between top management team behavioral integration and the innovativeness of team members. These findings are consistent with the current literature on the topic. On the other hand, functional diversity within the top management team's tenure has been found to positively impact innovation in research examining the relationship between top management team diversity and innovation (Lyon & Ferrier, 2002). According to research, there is a strong correlation between innovative performance and gender diversity in the senior management team (Ruiz-Jiménez et al., 2016). In this context, it is seen that the findings of the study are supported by the results evaluated in different studies in the literature.

The observation that members of the top management team may harbor negative ideas during information sharing and decision-making stages, yet struggle to implement these ideas, underscores a critical challenge. The reluctance to collaborate among top management team members can indeed hinder business innovation. Therefore,

the finding that an increase in managers' perception of information exchange and joint decision-making correlates with a decrease in innovative performance aligns with existing literature. These contradictions and the paucity of conclusive findings highlight a novel concept within upper echelon theory: organizational decisions and outcomes cannot be solely attributed to the composition of top management team members. In fact, several studies in the literature on the elements influencing the behavioral integration of individual senior management team members emphasize the significance of procedures such information exchange, collaborative behavior, and joint decision making. Simsek et al. (2005) have underlined the significance of processes including information exchange, joint decision making, and collaborative behavior in promoting information exchange among members of senior management teams. Conversely, other studies, like those by Li and Hambrick (2005), emphasize the significance of how top management team members interact and the potential for conflict or consensus arising from their diverse characteristics. Consequently, while some diverse groups excel in communication, discussion, and consensus-building, others may face challenges. Behavioral integration in top management teams plays a crucial role in mitigating the disadvantages of polarization and leads to improvements in decision-making processes during periods of polarization (DeBode et al., 2024). These arguments are substantiated by the findings of this study.

Conclusion

According to the study's findings, the joint decision-making sub-dimension of top management team behavioral integration has a negative effect on the initiation of strategic change. As managers' perceptions of joint decision-making behavior increase, their perception of initiating strategic change decreases. Among the sub-dimensions of TMTBI, shared behavior has a positive effect on the implementation of strategic change, while joint decision-making has a negative effect on the implementation of strategic change. Variables such as the size of the top management team, diversity within the team, education level, and average age affect the teams' innovative perspectives. Among the sub-dimensions of TMTBI, shared behavior has a positive effect on innovative performance. Among the sub-dimensions of strategic change, the initiation of strategic change has a negative effect on innovative performance, while the implementation of strategic change has a positive effect on innovative performance.

This study has certain limitations. This study encompasses senior executives working in private hospitals across Turkey. The research is applicable only to senior executives of private hospitals who agreed to participate in the study and responded to the surveys. Furthermore, the findings cannot be generalized to other sectors. The large geographical coverage of private hospitals nationwide has led to the selection of only one senior executive from each hospital. Consequently, the perception of strategic change, innovative performance, and especially the integration of top management team behavior has been limited to a single executive. This is one of the significant limitations of the study. Additionally, since this study is a cross-sectional type of research, it is limited to the specific time in which it was conducted.

By combining quantitative approaches with qualitative study methods, researchers can explore strategic change and its pre-processes in greater depth and gain richer insights. In this way, researchers can explore the subtleties of the integration of strategic change, innovative performance and top management team behavior and gain a more detailed understanding of the complex phenomena that quantitative research offers. Researchers and business practitioners alike may find great assistance in managing the challenges of organizational change from these findings. Researchers can also add to the body of knowledge by examining changes in the top management team's dynamics over time and how these changes affect organizational outcomes.

Declarations

Availability of data and materials

To provide a link to the Availability of data and materials, detailing how the data can be accessed or put: The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

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References

Afshar Jahanshahi, A., & Brem, A. (2017). Sustainability in SMEs: Top management teams' behavioral integration as a source of innovativeness. *Sustainability, 9*(10), 1899. https://doi.org/10.3390/su9101899

Altunışık, R., Coşkun, R., Bayraktaroğlu, S., & Yıldırım, E. (2007). Sosyal bilimlerde araştırma yöntemleri (5. baskı). Sakarya Yayıncılık.

Avby, G., Kjellström, S., & Andersson Bäck, M. (2019). Tending to innovate in Swedish primary health care: A qualitative study. *BMC Health Services Research, 19*(1), 1–10. https://doi.org/10.1186/s12913-019-3874-y

Bagheri, A., Akbari, M., & Artang, A. (2022). How does entrepreneurial leadership affect innovation work behavior? The mediating role of individual and team creativity self-efficacy. *European Journal of Innovation Management, 25*(1), 1–18. https://doi.org/10.1108/EJIM-07-2020-0281

Bocken, N. M., & Geradts, T. H. (2020). Barriers and drivers to sustainable business model innovation: Organization design and dynamic capabilities. *Long Range Planning, 53*(4), 101950. https://doi.org/10.1016/j.lrp.2019.101950

Calantone, R., Garcia, R., & Dröge, C. (2003). The effects of environmental turbulence on new product development strategy planning. *Journal of Product Innovation Management, 20*(2), 90–103. https://doi.org/10.1111/1540-5885.2002003

Camelo, C., Fernández-Alles, M., & Hernández, A. B. (2010). Strategic consensus, top management teams, and innovation performance. *International Journal of Manpower, 31*(6), 678–695. https://doi.org/10.1108/01437721011073373

Carmeli, A. (2008). Top management team behavioral integration and the performance of service organizations. *Group & Organization Management, 33*(6), 712–735. https://doi.org/10.1177/1059601108325696

Dalton, L., Butler-Henderson, K., Newstead, T., & Quinn, W. (2021). Leading health reform: A critical review of 'leadership' within allied health competency standards. *Australian Health Review, 45*(3), 368–376. https://doi.org/10.1071/AH20144

DeBode, J. D., Fox, C. J., & McSweeney, J. J. (2024). Top management team political polarization and its implications for strategic decision-making. *Small Group Research, 55*(1), 184–217. https://doi.org/10.1177/10464964231152234

Grant, A. M., Gino, F., & Hofmann, D. A. (2011). Reversing the extraverted leadership advantage: The role of employee proactivity. *Academy of Management Journal, 54*(3), 528–550. https://doi.org/10.5465/amj.2011.61968043

Hahs-Vaughn, D. L., & Lomax, R. G. (2020). *An introduction to statistical concepts* (4th ed.). Routledge. https://doi.org/10.4324/9781315624358

Hambrick, D. C., & Mason, P. A. (1984). Upper echelons: The organization as a reflection of its top managers. *Academy of Management Review, 9*(2), 193–206. https://doi.org/10.5465/amr.1984.4277628

Hashmi, H. B. A., Voinea, C. L., Caniëls, M. C., Ooms, W., & Abbass, K. (2023). Do top management team diversity and chief sustainability officer make firms greener? Moderating role of top management team behavioral integration. *Sustainable Development*, *31*(4), 2536-2547. https://doi.org/10.1002/sd.2529

Hazarbassanova, D. B. (2016). The value creation logic and the internationalisation of internet firms. *Review of International Business and Strategy, 26*(3), 349–370. https://doi.org/10.1108/RIBS-02-2016-0007

Herrmann, P., & Datta, D. K. (2005). Relationships between top management team characteristics and international diversification: An empirical investigation. *British Journal of Management, 16*(1), 69–78. https://doi.org/10.1111/j.1467-8551.2005.00429.x

Herrmann, P., & Nadkarni, S. (2014). Managing strategic change: The duality of CEO personality. *Strategic Management Journal, 35*(9), 1318–1342. https://doi.org/10.1002/smj.2156

Hoegl, M., & Proserpio, L. (2004). Team member proximity and teamwork in innovative projects. *Research Policy, 33*(8), 1153–1165. https://doi.org/10.1016/j.respol.2004.06.005

Kelly, L. M., Athanassiou, N., & Crittenden, W. F. (2000). Founder centrality and strategic behavior in the family-owned firm. *Entrepreneurship Theory and Practice, 25*(2), 27–42. https://doi.org/10.1177/104225870002500202

Kerr, N. L., & Tindale, R. S. (2004). Group performance and decision making. *Annual Review of Psychology, 55*, 623–655. https://doi.org/10.1146/annurev.psych.55.090902.142009

Kisfalvi, V., Sergi, V., & Langley, A. (2016). Managing and mobilizing microdynamics to achieve behavioral integration in top management teams. *Long Range Planning, 49*(4), 427–446. https://doi.org/10.1016/j.lrp.2015.12.015

Knight, D., Pearce, C. L., Smith, K. G., Olian, J. D., Sims, H. P., Smith, K. A., & Flood, P. (1999). Top management team diversity, group process, and strategic consensus. *Strategic Management Journal, 20*(5), 445–465. https://doi.org/10.1002/(SICI)1097-0266(199905)20:5<445::AID-SMJ27>3.0.CO;2-V

Kor, Y. Y. (2006). Direct and interaction effects of top management team and board compositions on R&D investment strategy. *Strategic Management Journal, 27*(11), 1081–1099 https://doi.org/10.1002/smj.554

Li, J., & Hambrick, D. C. (2005). Factional groups: A new vantage on demographic faultlines, conflict, and disintegration in work teams. *Academy of Management Journal*, *48*(5), 794-813. https://doi.org/10.5465/amj.2005.18803923

Liu, J., Chen, J., & Tao, Y. (2015). Innovation performance in new product development teams in C hina's technology ventures: the role of behavioral integration dimensions and collective efficacy. *Journal of Product Innovation Management*, *32*(1), 29-44. https://doi.org/10.1111/jpim.12177

Lyon, D. W., & Ferrier, W. J. (2002). Enhancing performance with product-market innovation: the influence of the top management team. *Journal of Managerial Issues*, 452-469.

Maditinos, D., Chatzoudes, D., & Sarigiannidis, L. (2014). Factors affecting e-business successful implementation. *International Journal of Commerce and Management*, *24*(4), 300-320. https://doi.org/10.1108/IJCoMA-07-2012-0043

Naranjo-Gil, D. (2015). The role of top management teams in hospitals facing strategic change: effects on performance. *International Journal of Healthcare Management, 8*(1), 34-41. https://doi.org/10.1179/2047971914Y.0000000078

Nielsen, S. (2010). Top management team diversity: A review of theories and methodologies. *International Journal of Management Reviews*, *12*(3), 301-316. https://doi.org/10.1111/j.1468-2370.2009.00263.x

Okumuş, F. (2003). A framework to implement strategies in organizations. *Management Decision*, *41*(9), 871-882. http://dx.doi.org/10.1108/00251740310499555

Parayitam, S., Phelps, L. D., & Olson, B. J. (2007). Strategic decision-making in the healthcare industry: the effects of physician executives on decision outcomes. *Management Research News*, *30*(4), 283-301. https://doi.org/10.1108/01409170710736329

Rosenbusch, N., Brinckmann, J., & Bausch, A. (2011). Is innovation always beneficial? A meta-analysis of the relationship between innovation and performance in SMEs. *Journal of Business Venturing*, *26*(4), 441-457. https://doi.org/10.1016/j.jbusvent.2009.12.002

Ruiz-Jiménez, J. M., Fuentes-Fuentes, M. D. M., & Ruiz-Arroyo, M. (2016). Knowledge combination capability and innovation: The effects of gender diversity on top management teams in technology-based firms. *Journal of Business Ethics*, *135*, 503-515. https://doi.org/10.1007/s10551-014-2462-7

Sağlık Bakanlığı. (2019). *Sağlık İstatistikleri Yıllığı 2020*. T.C. Sağlık Bakanlığı Yayınları. Ankara. https://www.saglik.gov.tr/TR-84966/saglik-istatistikleri-yilligi-2019-yayinlanmistir.html

Schaap, J. I. (2006). *Strategy implementation: An empirical study of the role of senior-level leaders in the Nevada casino industry.* Fielding Graduate University.

Schmidt, S. L., & Brauer, M. (2006). Strategic governance: How to assess board effectiveness in guiding strategy execution. *Corporate Governance: An International Review*, *14*(1), 13-22. http://dx.doi.org/10.1111/j.1467-8683.2006.00480.x

Sicotte, H., Drouin, N., & Delerue, H. (2014). Innovation portfolio management as a subset of dynamic capabilities: Measurement and impact on innovative performance. *Project Management Journal*, *45*(6), 58-72. https://doi.org/10.1002/pmj.21456

Simsek, Z., Veiga, J. F., Lubatkin, M. H., & Dino, R. N. (2005). Modeling the multilevel determinants of top management team behavioral integration. *Academy of Management Journal*, *48*(1), 69-84. https://doi.org/10.5465/amj.2005.15993139

Sminia, H. (2005). Strategy formation as layered discussion. *Scandinavian Journal of Management, 21*(3), 267-291. https://doi.org/10.1016/j.scaman.2004.09.002

Uhlaner, L., Massis, A. D., Jorissen, A., & Du, Y. (2021). Are outside directors on the small and medium-sized enterprise board always beneficial? Disclosure of firm-specific information in board-management relations as the missing mechanism. *Human Relations*, *74*(11), 1781-1819. https://doi.org/10.1177/0018726720932985

Vainieri, M., Ferrè, F., Giacomelli, G., & Nuti, S. (2019). Explaining performance in health care: How and when top management competencies make the difference. *Health Care Management Review, 44*(4), 306–317. https://doi.org/10.1097/HMR.0000000000000164

Wally, S., & Becerra, M. (2001). Top management team characteristics and strategic changes in international diversification: the case of US multinationals in the European community. *Group & Organization Management*, *26*(2), 165-188. https://doi.org/10.1177/1059601101262003

Wu, Y. (2018). The effects of strategic change on innovative performance in Taiwanese SMEs: The impacts of CEO's personality, top management team behavior integration, and organizational culture (Order No. 10811750*). ProQuest Dissertations & Theses Global*. (Publication No. 2043000271)

Yang, L., & Wang, D. (2014). The impacts of top management team characteristics on entrepreneurial strategic orientation: The moderating effects of industrial environment and corporate ownership. *Management Decision*, *52*(2), 378-409. https://doi.org/10.1108/MD-03-2013-0140

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Appendix

Questionnaire form

A. Strategic Change Scale
Initiation of Strategic Change
During the past 3 years, your firm has had strategic change related to…

1. 1.Entries or exits in international markets
2. 2.Additions and/or limitations markets
3. 3.New mergers and/or acquisitions completed
4. 4.Buying and/or selling of properties, plants, and equipment
5. 5.İncreases or decreases in R&D expenditures
6. Implementation of Strategic Change

During the past 3 years, your firm has had strategic change related to…

1. Change in organizational structure (e.g., increase/decrease in centralization/decentralization)
2. Restructuring or process changes (e.g., increase or decrease in steps to perform an activity)
3. increase or decrease in number of employees
4. changes in distribution of executive team members' titles (e.g., functional, product, geographical, or hybrid)
5. changes in formal incentives granted to executives

B. Innovative Performance Scale
Firm's performance compared to competitors at the present

1. Our firm's growth rate is higher than our competitors'
2. Our firm creates more customer value through innovation than competitors
3. Number of businesses generated through innovation is higher than in competitors
4. Number of spin-offs and start-ups generated though innovation is higher than in competitors
5. Frequency of major new product releases is faster than in competitors
6. Proportion of revenues generated though new products is higher than in competitors
7. The success ratio of new products is higher than in competitors
8. The improvement of quality for new product is better than in competitors

C. Top Management Behavior Integration Scale
Over the past 3 years, when your top management team made important decision regarding the firm's future

1. The ideas that our team members exchange are of high quality
2. The solutions that our team members put forward are of high quality
3. The dialogue among our team members produces a high level of creativity and innovation
4. When a team member is busy, other team members often volunteer to help her/him to manage her/his workload
5. Team members are flexible about sharing and/or switching responsibilities to make things easier for each other
6. Team members are willing to help each other complete jobs and meet deadlines
7. Team members usually let each other know when their actions affect another team member's work
8. Team members have a clear understanding of the joint problems and the needs of other team members
9. Team members usually discuss their expectations of each other