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THE INNOVATION PERSPECTIVES OF EMPLOYEES IN A PRIVATE HOSPITAL

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Research Article

Abstract

Aim: The aim of the study was to evaluate the innovation perspective of employees from technical, administrative and medical units in a private hospital of a health group.

Methods: In this cross-sectional study, 177 employees from different departments in a private hospital were included. The data were collected by a questionnaire regarding use of health technologies and innovation related items. These items were scored by using 5-point Likert scale (1: Strongly disagree; 2: Disagree; 3: Neither agree nor disagree; 4: Agree; 5: Strongly agree). After performing both Explanatory and Confirmatory factor analyses, the 15-item *Healthcare Innovation Scale* with 4 subgroups regarding "*Innovation Perception*", "*Innovation and Sector Relationship*", "*Innovation and Project Management*" and "*Innovation and Relationship with Competitors*" were defined.

Results: The item regarding "*expectations of patients*" (n=52, 30.1%) was stated primarily issue in the innovation process. In the scale, the score of the "*Innovation Perception*" subgroup was significantly higher in employees from the medical unit (4.07±0.58) and administrative unit (3.89±0.53) compared to those from the technical unit (3.48±0.62) (p=0.000). The score of the "*Innovation and Relations with Competitors*" subgroup was found to be significantly higher in administrative unit employees (3.53±0.76) compared to technical unit employees (3.14±0.76)(p=0.014).

Conclusion: Since innovation activity is a competitive factor for hospitals, health managers could take into consideration patients' expectations and employees' innovation perspectives. In addition, Healthcare Innovation Scale as a reliable and valid scale could be helpful for this purpose.

Keywords: Healthcare Professionals, Innovation Perspective, Private Healthcare Organization

Introduction

The intensive use of technologies is enabled knowledge to take its place among the production factors in economics (Thompson, 2018). In this respect, a rapid change process is undergone with the effect of technologies in each sector, like healthcare (Susanto and Chen, 2017). Nowadays, the development of health technologies requires a multidisciplinary approach and begins with the adaptation of scientific knowledge in basic sciences, medicine, and engineering. This process refers to the period starting with the introduction of the new health technology ideas (Stewart, et., al 2020; The AdHopHTA Project partners, 2015; WHO, 2015).

In this perspective, the term “Innovation” is defined in different ways. One of the internationally accepted definitions was included in the Oslo Guide published by the OECD in 2018. Here, the definition of innovation is: “The implementation of a new or significantly improved product, or process, a new marketing method, or a new organizational method in business practices, workplace organization or external relations” (OECD/Eurostat, 2018). Since innovations create economic value in the sector, it is defined as the transformation of knowledge and skills obtained by using science and technology into an economic product or service that the society can benefit. Innovation skills in businesses contribute to reducing costs, providing a competitive advantage, developing cheaper and higher quality products or services compared to competitors. For this reason, innovation is one of the resources that provide a significant competitive advantage for the business environment (Hana, 2013; MacNeil, et., al 2019).

Healthcare has a technology-intensive and multidisciplinary structure. Both organizations and patients could demand to see more technological structures for better healthcare (Berry, 2019; Bhavnani, et., al 2017; Pacifico Silva, et., al 2018). In this dynamic and complex environment, health professionals work together to provide best healthcare through new technologies. Therefore, healthcare organizations could also focus on research and innovation activities in this competitive sector for ensuring high qualified healthcare services and improving patient satisfaction in the healthcare organizations (Ruco, et., al 2021). Currently, patient-driven healthcare innovation is also new trend for healthcare organizations (Aghdam, et., al 2020).

Since benefits of innovation are converting knowledge into economic value, improving working conditions of health professionals and providing individual needs of patients, innovation process is triggered by multidisciplinary healthcare professionals (Berry, 2019; Bhavnani, et., al 2017; MacNeil, et., al 2019; Omachonu and Einspruch, 2010; The AdHopHTA Project partners, 2015; Pacifico Silva, et., al 2018). The aim of the study was to evaluate the innovation perspectives of employees from technical, administrative and medical units in a private hospital of a health group.

1. Research Methodology

In this cross-sectional study, a total of 177 employees (F/M: 104/73, mean age: 28.67 ± 7.05 years) from the technical unit (n=59), administrative unit (n=79), and medical unit (n=39) included in a private hospital of a healthcare group. Response rate was 57.1%. Data were collected by a questionnaire regarding socio-demographic properties of healthcare professionals, use of health technologies and innovation related items. The main inclusion criterion was being a volunteer to participate the study. Missing data and inconsistent responses were exclusion criteria.

Innovation related items were selected from literature review (n=5) and the innovation scale (n=10) that was not specific for the health sector (Can, 2012). After ethical permission was taken from the developer of innovation scale, suitable items were selected and revised for health sector. In addition, the other items were added by the study group according to the literature review (Aghdam, et., al 2020; Berry, 2019; Bhavnani, et., al 2017; Birken, et., al 2013; Jagadeeswari, et., al 2018; Länsisalmi, et., al 2006; MacNeil, et., al 2019; Millenson, et., al 2019; Omachonu and Einspruch, 2010; Ruco, et., al 2021; Stewart, et., al 2020; Susanto and Chen, 2017; The AdHopHTA Project partners, 2015; Thompson, 2018). Then, final form was obtained by performing a pilot study (n=10). The study was approved by the Ethics Committee of the Marmara University Health Sciences Institute (19.11.2018-220) and informed consent was given by all the participants.

2. Analysis

After performing basic statistical tests, both Explanatory Factor analysis and Confirmatory Factor Analysis were used for the scale. Explanatory factor analysis was used to determine the construct validity of the “*Healthcare Innovation Scale*”. Principal Component Analysis and Varimax Rotation method were used to examine the factor structure of the scale. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was used to test the sampling adequacy, and Bartlett's Test of Sphericity was used to test the sample size. KMO sampling adequacy measure was found to be 0.805. The result of Bartlett's Test of Sphericity was found to be $p=0.000$. Therefore, data were found to be sufficient for factor analysis (Tabachnick and Fidell, 2014). According to the Explanatory Factor Analysis, a structure consisting of 4 factors with 15 questions was obtained. It explained 63.28% of the total variance. These factors as

subgroups of the scale were named "Innovation Perception", "Innovation and Sector Relationship", "Innovation and Project Management" and "Innovation and Relations with Competitors". The reliability of the scale was evaluated by Cronbach's alpha coefficient and found to be high for all items (0.869) and subgroups (0.749-0.781) (Table 1).

Considering the goodness of fit indexes of the "Healthcare Innovation Scale" according to the Confirmatory Factor Analysis; it was at the acceptance level of compliance with RMSEA value of 0.08 and χ^2 value of 2.316 ($p=0.000$). CFI, AGFI, IFI, GFI, TLI, NFI indices were found to correspond to an acceptable fit at the 0.90 level (Tabachnick and Fidell, 2014).

Table 1: Explanatory Factor Analysis of The Healthcare Innovation Scale

Items*	Innovation Perception (n=5)	Innovation and Sector Relationship (n=4)	Innovation and Project Management (n=3)	Innovation and Relations with Competitors (n=3)	**Mean	SD
1 It is important for us to develop health technologies for different fields of activity.	0.754				3.87	0.84
2 The number of patents received is significant for our institution.	0.682				3.42	0.96
3 Diversity of product/service is important for our institution.	0.659				4.06	0.80
4 Numerous projects originating from new ideas, already initiated are successfully completed and implemented.	0.583				3.75	0.74
5 Efficiency is our primary goal for innovation.	0.533				3.86	0.91
6 We often lead our competitors while making changes that affect our sector.		0.757			4.11	0.83
7 We are usually the first to apply health technology products that will shape the sector.		0.716			3.96	0.84
8 Patient satisfaction is one of our primary goals.		0.708			4.37	0.81
9 We heed the suggestions, demands, and feedback from our patients while developing new products/services.		0.656			4.20	0.80
10 Project outputs are thoroughly evaluated and know-how for the next project.			0.815		3.88	0.84
11 Failed projects provide us an opportunity to analyse our shortcomings.			0.745		3.85	0.85
12 We actively use mobile platforms in the delivery of services.			0.681		3.99	0.91
13 We often compare the new products and projects of our competitors with our own products and projects.				0.849	3.54	0.95
14 We conduct research on our competitors' products, ongoing projects, and product development strategies.				0.764	3.70	0.98
15 We are inspired by the products and services of our competitors when designing new products/services.				0.710	3.22	0.95
Variance (63.282 %)	17.197	16.841	14.926	14.318		
Cronbach's Alpha Values	(0.869)	0.767	0.781	0.762	0.749	
Mean±SD	3.79±0.61	4.16±0.64	3.91±0.71	3.49±0.79		

Note(s): * 5-point Likert Scale (1: Strongly disagree - 5: Strongly agree)

**Means and SD values of items in the group

The profile of the study group was shown in Table 2. A total of 177 employees from technical unit (n=59; 33.3%), administrative unit (n=79; 44.6%), and medical unit (n=39; 22.1%) participated in the study. An increase in age and male predominance was seen in Technical unit

employees compared to other professionals ($p=0.000$). The ratio of married employees and mean age were lower in Administrative unit employees than the others ($p=0.000$). Educational profile was found to be similar among employees ($p=0.062$) (Table 2).

Table 2: The Profile of the Study Group

	Technical Unit Employees (n=59)		Administrative Unit Employees (n=79)		Medical Unit Employees (n=39)		Total (n=177)	
	n	%	n	%	n	%	n	%
Gender*								
Male	38	64.4	26	32.9	9	23.1	73	41.2
Female	21	35.6	53	67.1	30	76.9	104	58.8
Marital status**								
Married	30	50.8	14	17.7	15	38.5	59	33.3
Single	29	49.2	65	82.3	24	61.5	118	66.7
Age (years)***								
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Age (years)***	32.22	5.54	26,25	4.52	28.23	10.48	28.67	7.05
Education duration (years)****								
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Education duration (years)****	15.74	1.06	15,25	1.69	15.84	1.38	15.54	1.46

Note(s): * $p=0.000$ Technical Unit Employees vs Administrative Unit Employees $p=0.000$ Technical Unit Employees vs Medical Unit Employees $p=0.000$ Medical Unit Employees vs Administrative Unit Employees $p=0.37$

** $p=0.000$ Technical Unit Employees vs Administrative Unit Employees $p=0.000$ Technical Unit Employees vs Medical Unit Employees $p=0.31$ Medical Unit Employees vs Administrative Unit Employees $p=0.01$

*** Technical Unit Employees vs Administrative Unit Employees $p=0.000$ Technical Unit Employees vs Medical Unit Employees $p=0.022$ Medical Unit Employees vs Administrative Unit Employees $p=0.0003$

**** $p=0.062$

The main health technologies developed in the organization were "Information management systems" ($n=106$) and "Applications related to patient monitoring system" ($n=88$). According to employees, "saving time" ($n=69$; 20.3%), "Increase in workforce productivity" ($n=66$; 19.4%) and "Increase in user satisfaction" ($n=56$; 16.5%) were prominent points among expected benefits from the last health technology development projects. When employees were asked to factors affecting the health technology innovation process, the item regarding "Expectations of patients" ($n=52$, 30.1%) was stated primarily issue in the innovation process.

In the Healthcare Innovation Scale, the highest score was found as "Patient satisfaction is one of our primary goals" (4.37 ± 0.81), "We heed the suggestions, demands, and feedbacks from our patients while developing new products/services" (4.20 ± 0.80). The statements with the

lowest score were “*We are inspired by the products and services of our competitors when designing new products/services*” (3.22±0.95), “*The number of patents received is significant for our institution*” (3.42±0.96), and “*We often compare the new products and projects of our competitors with our products and projects*” (3.54±0.95) (Table 1).

After Explanatory factor analysis, 4 subgroups were determined as “*Innovation Perception*”, “*Innovation and Sector Relationship*”, “*Innovation and Project Management*” and “*Innovation and Relations with Competitors*” in Healthcare Innovation Scale. Subgroup scores of the scale were compared according to the occupational distribution of the employees.

No significant difference was found when the “*Innovation and Sector Relationship*” and “*Innovation and Project Management*” subgroup items were evaluated according to the occupational distribution of the employees in the study group ($p>0.05$) (Table 3).

The score of the “*Innovation Perception*” was significantly lower in technical unit employees (3.48±0.62) compared to medical unit employees (4.07±0.58) and administrative unit employees (3.89±0.53) ($p=0.000$ for both) (Table 3). As related to them, scores of items regarding “*The number of patents received is significant for our institution*”, “*It is important for us to develop health technologies for different fields of activity*” were significantly lower in a technical unit employee than the others ($p<0.05$). In addition, scores of items “*Diversity of product/service is important for our institution*” ($p=0.032$) and “*Efficiency is our primary goal for innovation*” ($p=0.001$) were significantly lower in employees from the technical unit compared to those in medical units ($p<0.05$) (Table 4).

Table 3: Scores of Subgroups in Healthcare Innovation Scale According to the Occupational Groups

	Occupational Groups	n	Mean	SD	p*
Innovation Perception	Technical Unit Employees	59	3.48	0.62	0.000**
	Administrative Unit Employees	79	3.89	0.53	
	Medical Unit Employees	39	4.07	0.58	
Innovation and Sector Relationship	Technical Unit Employees	59	4.02	0.74	0.247
	Administrative Unit Employees	79	4.20	0.60	
	Medical Unit Employees	39	4.28	0.50	
Innovation and Project Management	Technical Unit Employees	59	3.79	0.79	0.358
	Administrative Unit Employees	79	3.95	0.71	
	Medical Unit Employees	39	4.01	0.55	

Innovation and Relations with Competitors	Technical Unit Employees	59	3.14	0.76	0.000***
	Administrative Unit Employees	79	3.53	0.76	
	Medical Unit Employees	39	3.91	0.66	

Note(s): * 5-point Likert Scale (1: Strongly Disagree - 5: Strongly Agree)

* Kruskal Wallis test was used ** Technical Unit Employees vs Administrative Unit Employees $p=0.000$ Technical Unit Employees vs Medical Unit Employees $p=0.000$ *** Technical Unit Employees vs Administrative Unit Employees $p=0.014$ Technical Unit Employees vs Medical Unit Employees $p=0.000$ Medical Unit Employees vs Administrative Unit Employees $p=0.013$

Table 4: Scores of Items in Innovation Perception Subgroup According to the Occupational Groups

Innovation Perception	Occupational Distribution	n	Mean	SD	p*
It is important for us to develop health technologies for different fields of activity.	Technical Unit Employees	59	3.51	0.91	0.001 **
	Administrative Unit Employees	79	4.01	0.79	
	Medical Unit Employees	39	4.11	0.65	
The number of patents received is significant for our institution.	Technical Unit Employees	59	2.91	0.93	0.000 ***
	Administrative Unit Employees	79	3.59	0.90	
	Medical Unit Employees	39	3.84	0.82	
Diversity of product/service is important for our institution.	Technical Unit Employees	59	3.82	0.87	0.032 ****
	Administrative Unit Employees	79	4.13	0.76	
	Medical Unit Employees	39	4.26	0.72	
Numerous projects originating from new ideas, already initiated are successfully completed and implemented.	Technical Unit Employees	59	3.58	0.84	0.103
	Administrative Unit Employees	79	3.80	0.65	
	Medical Unit Employees	39	3.92	0.74	
Efficiency is our primary goal for innovation.	Technical Unit Employees	59	3.56	0.89	0.001 *****
	Administrative Unit Employees	79	3.90	0.84	
	Medical Unit Employees	39	4.23	0.94	

Note(s): * 5-point Likert Scale (1: Strongly Disagree - 5: Strongly Agree) * Kruskal Wallis test was used. ** Technical Unit Employees vs Administrative Unit Employees $p=0.003$ Technical Unit Employees vs Medical Unit Employees $p=0.001$ *** Technical Unit Employees vs Administrative Unit Employees $p=0.000$ Technical Unit Employees vs Medical Unit Employees $p=0.000$ **** Technical Unit Employees vs Medical Unit Employees $p=0.027$ ***** Technical Unit Employees vs Medical Unit Employees $p=0.002$

The score of the *"Innovation and Relations with Competitors"* subgroup was found to be significantly lower in technical unit employees (3.14 ± 0.76) compared to administrative unit employees (3.53 ± 0.76) ($p=0.014$). It was also found to be significantly higher in medical unit employees (3.91 ± 0.66) than the others ($p=0.000$, $p=0.013$ respectively) (Table 3).

In this subgroup scores of items including *"We often compare the new products and projects of our competitors with our own products and projects"* and *"We are inspired by the products and services of our competitors when designing new products/services"* were significantly higher compared in the medical unit employees than the others ($p<0.05$). Moreover, *"We conduct research on our competitors' products, ongoing projects, and product development*

strategies” item score was significantly lower in technical unit employees compared to those of others ($p < 0.05$) (Table 5).

Table 5: Scores of Items in Innovation and Relations with Competitors Subgroup According to the Occupational Groups

Innovation and Relations with Competitors	Occupational Distribution	n	Mean	SD	p*
We often compare the new products and projects of our competitors with our own products and projects.	Technical Unit Employees	59	3.22	1.00	0.001**
	Administrative Unit Employees	79	3.55	0.93	
	Medical Unit Employees	39	3.97	0.71	
We conduct research on our competitors' products, ongoing projects and product development strategies.	Technical Unit Employees	59	3.31	1.10	0.001***
	Administrative Unit Employees	79	3.78	0.91	
	Medical Unit Employees	39	4.08	0.74	
We are inspired by the products and services of our competitors when designing new products/services.	Technical Unit Employees	59	2.91	0.90	0.000****
	Administrative Unit Employees	79	3.21	0.94	
	Medical Unit Employees	39	3.72	0.86	

Note(s): * 5-point Likert Scale (1: Strongly Disagree - 5: Strongly Agree)

* Kruskal Wallis test was used. ** Technical Unit Employees vs Medical Unit Employees $p=0.000$ Administrative Unit Employees vs Medical Unit Employees $p=0.024***$ Technical Unit Employees vs Administrative Unit Employees $p=0.020$

Technical Unit Employees vs Medical Unit Employees $p=0.000****$ Technical Unit Employees vs Medical Unit Employees $p=0.000$ Administrative Unit Employees vs Medical Unit Employees $p=0.012$

3. Conclusions and Recommendations

Healthcare institutions have technology-intensive structure with dynamic character (Pacífico Silva, et., al 2018). Since patients are the centre of the health system, innovative health technologies focus on facilitating access to healthcare services, shortening the duration of diagnosis and treatment of diseases (Millenson, et., al 2019). Within the scope of this study, it was aimed to evaluate innovation perspectives of employees in a private hospital of a health group.

In the study, “*Information management systems*” and “*Patient monitoring systems*” were recently developed innovative products in the organization. These results were predicted when innovation in healthcare where data can be followed in a digital environment (Länsisalmi, et., al 2006). Healthcare is a technology-intensive industry that undergoes an accelerated transformation in the digitalizing world. Innovation activities in healthcare focus on digital

products, information management systems, monitoring of the patient and patient-related processes at the forefront (Bhavnani, et., al 2017; Omachonu and Einspruch, 2010).

In the study, “*Healthcare Innovation Scale*” that consisted of 4 subgroups with 15 questions was used to evaluate the innovation perspectives of employees. Factor analyses for construct validity and Cronbach’s alpha values for internal validity were carried out. When the scale was examined as item-based, the highest scores were observed in items regarding “*Patient satisfaction is one of our primary goals*”, and “*We heed the suggestions, demands and, feedbacks from our patients while developing new products/services*” item. Innovation process is carried out according to project management principles and has vital importance for achieving the desired health outcomes and ensuring satisfaction in healthcare (Birken, et., al 2013; Länsisalmi, et., al 2006). Since the principle of economic transformation into a product/service is the most fundamental aim of innovation activities, this statement fits with the concept of innovation. Therefore, “*Meeting customer demands and needs*” was determined as the most important expression for innovation processes (Hana, 2013). Therefore, the primary factor is to increase the satisfaction level by meeting the patient's expectations.

Employees from different occupations work together for providing the best healthcare. The key superiority condition for using integrated different technologies in healthcare is to create a platform for employees in organizations (European Commission, 2019). In the study, the “*Innovation Perception*” and the “*Innovation and Relations with Competitors*” subgroups of the scale showed a significant difference according to occupational distribution. Scores of the “*Innovation Perception*” subgroup and items in this subgroup regarding “*The number of patents received is significant for our institution*” and “*It is important for us to develop health technologies for different fields of activity*” were lower in the technical unit employee than the others. Moreover, an increase in scores of items regarding “*Diversity of product/service is important for our institution*” and “*Efficiency is our primary goal for innovation*” were seen in medical unit employees than technical unit employees in the study. The technical unit employees are involved in the project process and the medical unit employees are involved as the end-user. It can be inferred that the administrative unit staff is involved in reporting, finding resources, evaluating patient and user demands and preparing project proposals (Birken, et., al 2013). According to the findings, medical unit employees had the highest score making this difference.

This situation reveals that medical unit employees have a high level of awareness of the process, even if they could not be involved in the innovation process, directly. In medical units' perspectives, the increasing competition, the rapid development of health technologies, changes in patients' expectations, and providing the best diagnosis and treatment are associated with the innovation in healthcare (Omachonu and Einspruch, 2010).

Score of "*Innovation and Relations with Competitors*" subgroup was lower in Technical unit employee than the others whereas, the highest score was seen in employees from medical unit and their items found to be low in employees from technical unit. Similar trend was seen in items including "*We often compare the new products and projects of our competitors with our own products and projects*" and "*We are inspired by the products and services of our competitors when designing new products/services*", "*We conduct research on our competitors' products, ongoing projects and product development strategies*". Since health technology innovation is a process that includes technical issues; technical unit employees are predominantly involved in the projects. Moreover, administrative and medical unit employees are involved in different processes such as determining the needs, evaluating the effectiveness, and finding resources because the critical point is to improve the quality of healthcare services (Omachonu and Einspruch, 2010).

The expected benefits of health technology innovation are increased *efficiency* and *quality of patient care for the healthcare professionals*. These can be considered as institutional benefits because increasing workforce efficiency and time-saving also contribute to the delivery of integrated healthcare services. Thus, accessing more information about patients enables personalizing healthcare services by innovative health technologies (Jagadeeswari, et., al 2018). In the study, it was determined that the demands and expectations of the patients were more effective in the innovation process. Benefits expected from innovative activities in health technologies are addressed in two stages such as patient-oriented and organizational benefits. All innovative activities are carried out in this direction for their competitive advantages (Berry, 2019; Hana, 2013).

There is no significant difference in the "*Innovation and Sector Relationship*" subgroup according to the occupational distribution. It is not possible to think of innovation activities in the health industry independently from the health system. Innovation activities should be carried

out with a multidisciplinary approach and with the contributions of all stakeholders of the health sector (Berry, 2019; Bhavnani, et., al 2017; Hana, 2013).

When the "*Innovation and Project Management*" subgroup was examined, no significant difference was found between the occupational distributions. It is known that project management skill has a significant impact on innovation processes in the service sector. It should not be forgotten that the innovation process shows a complex structure and ideas for the correct management of projects have priority (Schultz, et., al 2019).

In the study, it is seen that the medical unit employees provided more supportive scores. It has been determined that patient expectations are prioritized, and administrative unit employees also make demands. On the other hand, technology-intensive processes are on the agenda because the expectations of patients are constantly increasing in the health sector (Berry, 2019). For this reason, it was emphasized that innovation should not be perceived only as technological development or providing a competitive advantage, but as projects in which strategic priorities are determined (Bhavnani, et., al 2017; WHO, 2015). Therefore, the qualified employees are important for the sustainable development in healthcare (Francisco Shapovalova, et., al 2015).

In innovation processes, health managers involve the innovation process by supporting projects and organizations of resources and creating innovative environment for employees. At this point, managerial processes are the centre of innovation process. Therefore, health managers' point of views and the experiences of human resources in the team contribute to innovation by facilitating organizational processes (Malik, et., al 2017).

Although the study contributed information about innovation perspective of employees, it had some limitations. Cross-sectional design of the study carried out in a private hospital was the main limitation of the study. Both of qualitative and quantitative studies should be planned for "*Healthcare Innovation Scale*" in large groups.

Declaration of competing interest

The authors declare no conflicts of interest and any specific grant from funding agencies.

Supplementary

Supplement 1: Items in The Healthcare Innovation Scale*

1	It is important for us to develop health technologies for different fields of activity.
2	The number of patents received is significant for our institution.
3	Diversity of product/service is important for our institution.
4	Numerous projects originating from new ideas, already initiated are successfully completed and implemented.
5	Efficiency is our primary goal for innovation.
6	We often lead our competitors while making changes that affect our sector.
7	We are usually the first to apply health technology products that will shape the sector.
8	Patient satisfaction is one of our primary goals.
9	We heed the suggestions, demands and feedbacks from our patients while developing new products/services.
10	Project outputs are thoroughly evaluated and know-how for the next project.
11	Failed projects provide us an opportunity to analyse our shortcomings.
12	We actively use mobile platforms in the delivery of services.
13	We often compare the new products and projects of our competitors with our own products and projects.
14	We conduct research on our competitors' products, ongoing projects and product development strategies.
15	We are inspired by the products and services of our competitors when designing new products/services.

Note(s): *5-point Likert Scale (1: Strongly Disagree - 5: Strongly Agree)

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