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Artificial Intelligence in Healthcare: A Way Towards Innovating Healthcare Devices

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Abstract
Artificial intelligence is an emerging technology that has a huge influence on healthcare facilities in today's generation. Current medical facilities are widely dependent on technology. AI technology has the potential to solve different problems in the healthcare system and it is used in the diagnosis of diseases, decision-making of treatments and training of healthcare experts. This research was performed to analyse the role of AI technology in the advancement of healthcare facilities. This research also focuses on identifying the benefits of AI technology in the advancement of medical and healthcare equipment. The quantitative research design has been followed in this research to address different research questions during the research. In this research positivism research philosophy was also followed to improve the effectiveness of the study. The quantitative data collection and analysis process has been followed in this research and a survey has been performed on 51 independent people through 10 closed-ended questions. This unbiased survey helps to make decisions and the data analysis through advanced statistical methods also improves the effectiveness of the study. This research also gives insight into the role of artificial intelligence in improving medical facilities around the world. Besides, this study also focuses on the basic implications of implementing AI technology in different medical equipment.

1. Introduction

1.1 Overview of the topic

Artificial intelligence (AI) technology is an emerging technology in computer science that is concerned with building smart and capable machines to perform many efficient tasks in different fields. AI is a new wide-ranging technology that helps to make machines smarter. It refers to the science and engineering to make intelligent machines with the help of different algorithms. AI technology has the potential to solve different problems and learn patterns or relationships from huge multidimensional datasets. In 2021 the market of AI technology in healthcare was worth around 11 billion U.S. dollars and it is projected to reach around 188 billion U.S. dollars worldwide by 2030 [1]. This emerging technology helps different business and service sectors to provide optimum to business owners and users.

The healthcare system of today's world is widely dependent on AI technology and this evolving technology provides efficient and effective medical support. AI technology changes the way of diagnosis and treatment in the healthcare system. Different tools and machines today are developed by implementing AI technology and these advanced machines help in the early detection of diseases, diagnosis, and decision-making of treatment, research and development and the training of healthcare experts. IoT-enabled Oxygen saturation and monitoring systems are one of them that is dependent on the new emerging AI technology [2]. Besides this, AI technology also helps to improve the administrative system of hospitals to give people good medical support. On this note, conducting research on the role of AI technology will help to understand the importance of AI technology and the research will also give

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insight into different problems of adopting AI technology in the present scenario.

1.2 Rationale

Technology plays a significant role in the digitisation of every service around the world. AI technology is one of them that possess an ability to improve each and every aspect of human life. Healthcare authorities all over the world implement different advanced technologies to modify and improve their services. AI in healthcare is used to analyse medical data and to predict treatment outcomes for patients. AI helps healthcare professionals to better understand the pattern and requirements of their patients through in-depth analysis. The ability to analyse data *improves the diagnosis procedure* and helps healthcare experts to make effective treatment plans for patients. Along with that, AI helps in fostering improvement in administrative routine tasks by maintaining patients' medical records. Following this trend, the global healthcare industry for adopting AI technologies is expected to reach up to 28 billion US dollars as of 2025 [3].
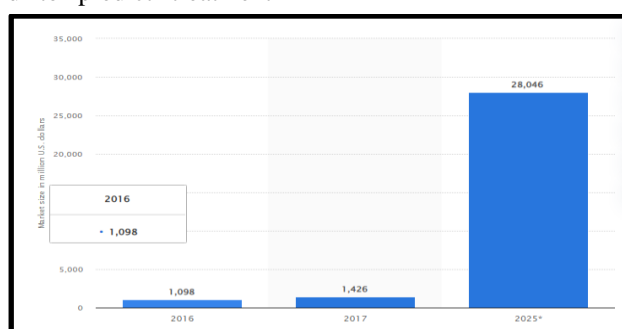
Figure 1: Global market size of AI in the healthcare industry for the years 2016, 2017 and 2025 (Source: [3])

Discovering the overall benefits of AI technology, and its *time-efficient administrative work* in hospitals enables medical professionals to care for patients. AI technology can also improve *health monitoring and digital consultation*. Wearable health tech gadgets and other monitoring instruments in recent times integrate AI technology. It is useful to improve the effectiveness of the instrument and also helps people to live healthy lives. Presently hospitals and other healthcare service providers such as pharmaceutical companies use AI technology for *quality control, personalisation of products, and cyber securities*. AI technology is also used by different pharmaceutical companies to *manage their inventory* and in the field of research and development. A survey shows that 60% of people state that AI technology can improve the quality control of medical facilities and around 31% of people state that pharmaceutical companies can perform inventory management by implementing AI technology [4]. Considering the overall benefits and advantages of implementing AI technologies in healthcare, all healthcare organisations are focusing on adopting this as a potential solution for overcoming various existing issues and thereby providing effective care to patients. Therefore, the following study encompasses the identification of all the aspects associated with incorporating AI technologies in healthcare and thereby attaining the objectives with utmost effectiveness.
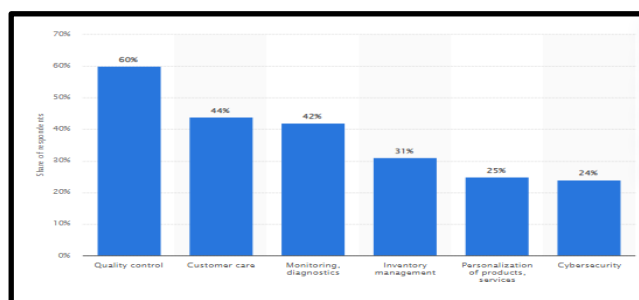
Figure 2: Usage of AI pharmaceutical and healthcare industry as of 2020 (Source: [4])

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1.3 Aim and objectives

The aim of the study is to identify the role of Artificial intelligence technology in innovating healthcare devices and the research also focuses on the implications of implementing AI technology in the healthcare system.

Objective

- To explore the role of AI technology in the innovation of advanced medical equipment

- To identify the benefits and risk factors of incorporating AI technologies in healthcare

- To determine the problems that emerge from the lack of AI technologies in healthcare

- To identify innovative AI tools that help in innovating healthcare services

1.4 Significance of the study

Healthcare facilities have become the most important aspect of human life today and implementation of technology in healthcare facilities is the only way to advance the existing healthcare facilities. Technology makes healthcare services more effective and helps people to get optimum services. AI technology is an emerging and wide-ranging technology that helps in different aspects of life in the present day. It gives huge benefits in improving business models and healthcare facilities all over the world. AI technology makes healthcare facilities effective and efficient by implementing machine learning algorithms. This advanced technology changes the way of diagnosis and treatment in the healthcare system. Implementing AI technology in healthcare devices improves the effectiveness and productivity of that device and consequently helps people to get good healthcare services.

This research focuses on the role of AI technology in innovating advanced healthcare devices. Therefore, this study is significant to understand the role of AI technology and the basic implications of implementing the technology in healthcare services.

1.5 Definition of keywords

Artificial intelligence (A.I):

"Artificial intelligence" is the stimulation of human intelligence processed by machines, especially by the computer system. AI is an emerging technology that has the capability to perform human work and it is also capable of learning human behaviours [5]. Generally, AI systems work with the help of large amounts of data and analyse correlations and patterns of data to make decisions to perform different works. AI technology has the capability to choose correct algorithms and also has self-correction capability to enhance the performance of the system.

Healthcare facilities:

"Health care facility" means an institution that provides treatment or cares for the physical, mental, psychological and emotional illness of people. Healthcare facilitiesrefer to the service that mainly focuses on giving treatments to physically and mentally sick people [6]. The healthcare services also provide diagnostic and treatment services to patients who require intensive care and medical facilities. Healthcare facilities also encompass the diagnosis and prevention techniques of different diseases. Healthcare facilities include different factors such as hospitals, medical nursing homes, doctors, nurses, medical laboratories and different diagnostic equipment.

2. Methods

Methodology in research is the specific process or technique that helps to determine and select suitable processes for the research and also helps to analyse different collected information about the topic. The **quantitative research design** has been followed in this research to address different research questions and also helps researchers to deeply understand the main perspective of the research. Quantitative research also focuses on the focus groups, participants' observations and in-depth interviews of people and that improves the effectiveness of the research and helps researchers to get valid output from the research [7]. Research philosophy is also an important part of a research study. That helps to analyse each and every aspect

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of the research more prominently and make the research study valid and effective.

The positivism research philosophy is chosen here in this research to cover a wide range of situations in a short time period [8]. In this research *positivism research philosophy* helps to formulate different laws on positive dynamics of the social universe and that helps to improve the significance of the research study. In this research, the positivism research philosophy has helped to prominently identify the role of AI technology in the innovation of advanced healthcare equipment. The *inductive research approach* has also been chosen here to improve the flexibility of the research and also support the new theory generation about the topic [9]. In this research, an inductive research approach has helped to determine different innovative tools to implement AI technology in the field of healthcare.

A primary quantitative data collection procedure has been chosen for this research and a survey has been completed on 51 individual participants through 10 close-ended questions. IBM SPSS software has been used during the data analysis procedure. This platform helps to perform advanced statistical analysis on the collected data and the vast machine learning algorithm improves the authenticity of the analysis. This advanced statistical analysis technique improves decision-making and also improves the effectiveness of the study. Besides, the research ethics has been maintained by maintaining confidentiality and privacy during the study. During the survey, no participants have been forced to participate in the survey procedure and unbiased data has been collected to perform this research study.

3. Results

Descriptive Statistics

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
The role of AI technology is outstanding in innovation of advance medical equipment	51	0	4	3.00	1.296
Artificial intelligence (AI) is rapidly changing medical practice by inventing modern devices	51	0	4	3.37	1.113
AI technology is continuously improving healthcare operations	51	0	4	2.92	1.214
AI technologies and their biomedical applications are facing challenges in treatment processes	51	0	4	2.69	1.364
AI technology helps modernise healthcare environments and promote safe efficiency in care settings	51	0	4	3.55	1.006
Both regulatory requirements and customer demand have become fulfilled within the collaboration of AI technology	51	0	4	2.41	1.388
AI technology is reshaping the financial status of the healthcare department	51	0	4	3.18	1.212
Innovative AI tools help in innovating healthcare services to serve people better experience	51	0	4	3.04	1.248
Valid N (listwise)	51				

Figure 3.1: Descriptive statistics (Source: SPSS)

In SPSS analysis, "descriptive statistics" is a vital table that is associated with the description of the features of the research topic. Summarising the data and a brief description of the relationship between research variables, "descriptive statistics" is a valuable table [10]. Among all the columns, "standard deviation" is the main column that highlights the interconnection of the research variables. The "standard deviation" values are *1.296, 1.113, 1.214, 1.364, 1.006, 1.388, 1.212,* and *1.248*. All the utilities have shown that there is a "positive connection" among the "research variables".

Frequency Analysis

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Statistics

		Age	Gender	The role of AI technology is outstanding in innovation of advance medical equipment	Artificial intelligence (AI) is rapidly changing medical practice by inventing modern devices	AI technology is continuously improving healthcare operations	AI technologies and their biomedical applications are facing challenges in treatment processes	AI technology helps modernise healthcare environments and promote safe efficiency in care settings	Both regulatory requirements and customer demand have become fulfilled within the collaboration of AI technology	AI technology is reshaping the financial status of the healthcare department	Innovative AI tools help in innovating healthcare services to serve people better experience
N	Valid	51	51	51	51	51	51	51	51	51	51
	Missing	0	0	0	0	0	0	0	0	0	0
Mean		1.45	.63	3.00	3.37	2.92	2.69	3.55	2.41	3.18	3.04
Median		1.00	1.00	3.00	4.00	3.00	3.00	4.00	3.00	4.00	4.00
Mode		2	1	4	4	4	4	4	3	4	4

Figure 3.2: Frequency analysis (Source: SPSS)

In order to calculate and justify whether the data frequency is valid or not the "frequency analysis" table is useful. There are several columns in the frequency table but the "frequency analysis" table is mainly depending on "mean" and "median" values [11]. The "mean values" of the variables are *1.45, 0.63, 3.00, 3.37, 2.92, 2.69, 3.55, 2.41, 3.18,* and *3.04*. These values represent the average scores among the research variables of this research study. Contradictory, the research variables' "median values" are *1, 1, 3, 4, 3, 3, 4, 3, 4,* and *4*. The value of the median column is indicating the data that are situated in the middle of the two values. However, the values specified that the frequency of the collected data is accurate and able to be generated through SPSS software.

Correlation analysis

Correlations

|		The role of AI technology is outstanding in innovation of advance medical equipment	Artificial intelligence (AI) is rapidly changing medical practice by inventing modern devices	AI technology is continuously improving healthcare operations	AI technologies and their biomedical applications are facing challenges in treatment processes	AI technology helps modernise healthcare environments and promote safe efficiency in care settings	Both regulatory requirements and customer demand have become fulfilled within the collaboration of AI technology	AI technology is reshaping the financial status of the healthcare department	Innovative AI tools help in innovating healthcare services to serve people better experience
The role of AI technology is outstanding in innovation of advance medical equipment	Pearson Correlation	1	.887**	.953**	.939**	.874**	.923**	.955**	.976**
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000	.000
	N	51	51	51	51	51	51	51	51
Artificial intelligence (AI) is rapidly changing medical practice by inventing modern devices	Pearson Correlation	.887**	1	.836**	.869**	.939**	.805**	.929**	.853**
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000	.000
	N	51	51	51	51	51	51	51	51
AI technology is continuously improving healthcare operations	Pearson Correlation	.953**	.836**	1	.951**	.822**	.933**	.921**	.965**
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000	.000
	N	51	51	51	51	51	51	51	51
AI technologies and their biomedical applications are facing challenges in treatment processes	Pearson Correlation	.939**	.869**	.951**	1	.798**	.947**	.918**	.935**
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000	.000
	N	51	51	51	51	51	51	51	51
AI technology helps modernise healthcare environments and promote safe efficiency in care settings	Pearson Correlation	.874**	.939**	.822**	.798**	1	.737**	.887**	.842**
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000	.000
	N	51	51	51	51	51	51	51	51
Both regulatory requirements and customer demand have become fulfilled within the collaboration of AI technology	Pearson Correlation	.923**	.805**	.933**	.947**	.737**	1	.907**	.925**
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.000	.000
	N	51	51	51	51	51	51	51	51
AI technology is reshaping the financial status of the healthcare department	Pearson Correlation	.955**	.929**	.921**	.918**	.887**	.907**	1	.947**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000		.000
	N	51	51	51	51	51	51	51	51
Innovative AI tools help in innovating healthcare services to serve people better experience	Pearson Correlation	.976**	.853**	.965**	.935**	.842**	.925**	.947**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	
	N	51	51	51	51	51	51	51	51

**. Correlation is significant at the 0.01 level (2-tailed).

Figure 3.3: Correlation analysis (Source: SPSS)

Measuring the linear connection among contrasting research variables, the "correlation analysis" table is one of the most valuable elements. This table primarily depends on the "P-value" and tells the value is acceptable in the case of 1 which is greater than 0 (1>0) [12]. There are maximum numerical numbers higher than 0, but a few numerical data on this above "correlation analysis" table remain less than 1. This does not show there is a weak connection between research variables.

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Bar chart analysis
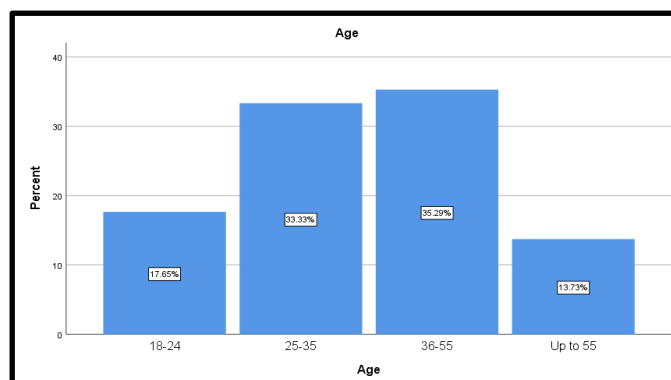
Figure 3.4: Age group (Source: SPSS)

Following the above bar chart it has been recognised that a total number of four different "age groups" have been set in the survey to know about the group of people who are more acknowledged to domestic violence. In this regard, in the first age group of "18-24" there were **17.65%** of respondents present. Along with this, in the second age group of "25-35" there were **33.33%** of respondents present. In the third age group of "35-55" there were **35.29%** of respondents present. Lastly, **13.73%** of the people above 55 years old were present in the survey process. Based on it, this clears it up that the lowest number of participants were in the "up to 55 years old" group and the largest number of participants were in the "36-55 years old" group.
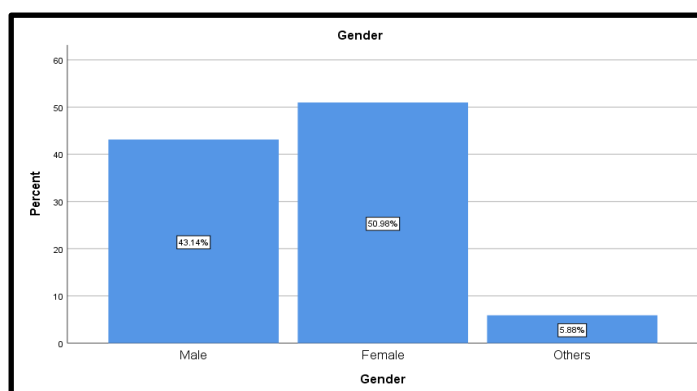
Figure 3.5: Gender group (Source: SPSS)

All gender differences were given the opportunity to participate in the survey process. In the survey process, gender was divided into three types of groups. In this regard, in the first gender group of "males" there were **43.14%** of respondents present. Along with this, in the second gender group of "females", there were **50.96%** of respondents present. Lastly, **5.88%** of the people belonged to the "other gender group" in the survey process. The lowest number of participants was in the "other gender" group and the largest number of participants was in the "female" group. Women participated more in this survey as they have more knowledge about Artificial Intelligence and its effectiveness in the healthcare department compared to the other genders.

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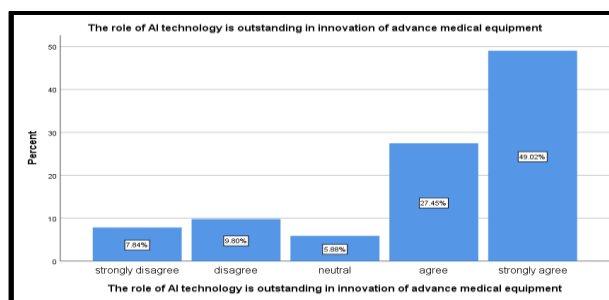
Figure 3.6: The role of AI technology is outstanding in the innovation of advanced medical equipment (Source: SPSS)

Based on this bar chart, it has been identified that 49.02% of the population is "strongly determined" and *27.45%* of the population is "determined" that the role of AI technology is outstanding in the innovation of advanced medical equipment. Thus, *5.88%* of the population was not interested in answering it as they had no such knowledge about this matter. Contradictory, *9.80%* of the population is "strongly denied" and *7.84%* of the population is "denied".
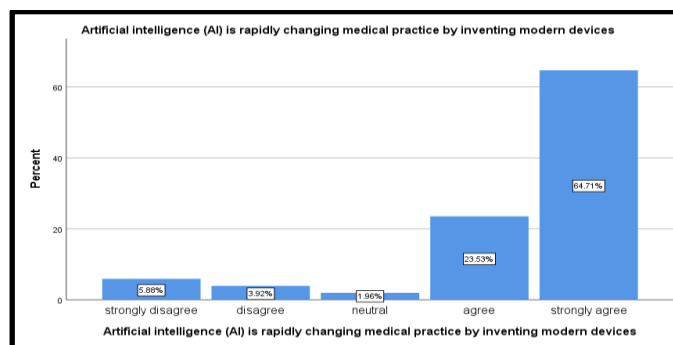

Figure 3.7: Artificial intelligence (AI) is rapidly changing medical practice by inventing modern devices

(Source: SPSS)

It has been understood following the above bar chart that *64.71%* of the population is "strongly determined" and *23.53%* of the population is "determined" regarding the second statement of "Artificial intelligence (AI) is rapidly changing medical practice by inventing modern devices". Thus, *1.96%* of the population was not interested in answering it as they had no such knowledge about this matter. Contradictory, *3.92%* of the population is "strongly denied" and *5.88%* of the population is "denied".
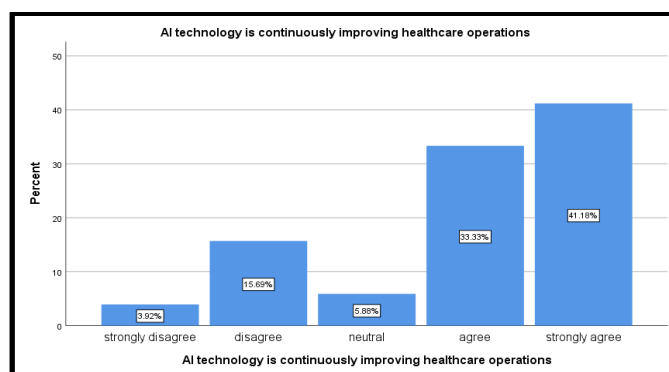

Figure 3.8: AI technology is continuously improving healthcare operations (Source: SPSS)

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According to this bar graph it has been recognised that **41.18%** of the population is "strongly determined" and **33.33%** of the population is "determined" regarding the third statement of "AI technology is continuously improving healthcare operations". It also has been seen that **5.88%** of the population prefer to not answer the statement because they had limited knowledge about this matter. Contradictory, **15.69%** of the participants of the survey "strongly denied" and **3.92%** of the participants of the survey "denied" that AI technology is improving healthcare operations.
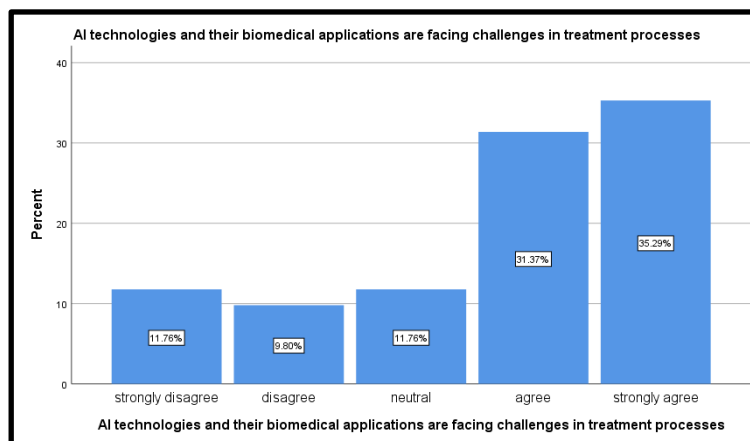
Figure 3.9: AI technologies and their biomedical applications are facing challenges in treatment processes (Source: SPSS)

Following the above bar chart, **35.29%** of the population "strongly agreed" and **31.37%** of the population is "agreed" regarding the fourth statement of "AI technologies and their biomedical applications are facing challenges in treatment processes". Along with this, 11.76%of the population did not answer this statement as they had no such knowledge about biomedical application. In opposition, **9.80%** of the population is strongly denied and **11.76%** of the population is denied.
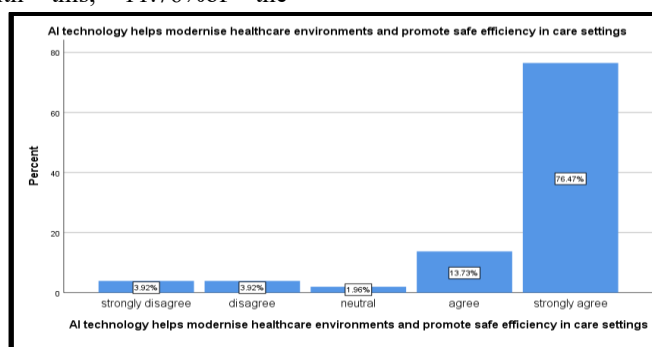

Figure 3.10: AI technology helps modernise healthcare environments and promote safe efficiency in care settings (Source: SPSS)

According to the above bar chart, **76.47%** of the population "strongly agreed" and **13.73%** of the population is "agreed" with the fifth declaration of "AI technology helps modernise healthcare environments and promote safe efficiency in care settings". Due to not having so much understanding about this matter, **1.96%** of the population was not interested in answering it. Contradictory, **3.92%** of the population is strongly denied and **3.92%** of the population is denied.
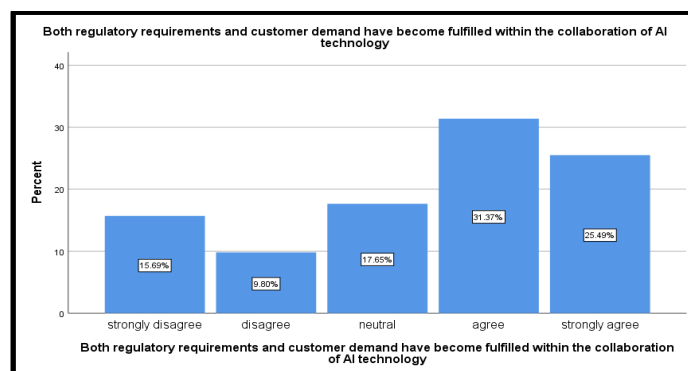
Figure 3.11: Both regulatory requirements and customer demand have become fulfilled within the collaboration of AI technology (Source: SPSS)

Based on the above bar graph it has been shown that **25.49%** of the population is "strongly agreed" and **31.37%** of the population is "agreed" that both "regulatory requirements" and "customer demand" have become fulfilled within the collaboration of AI technology. In addition to that, due to a lack of proper experience with regulatory requirements and customer demand, 17.65% of the population did not give an answer, rather they preferred to be neutral. Thus, **9.80%** of the population is strongly denied and **15.69%** of the population is denied.
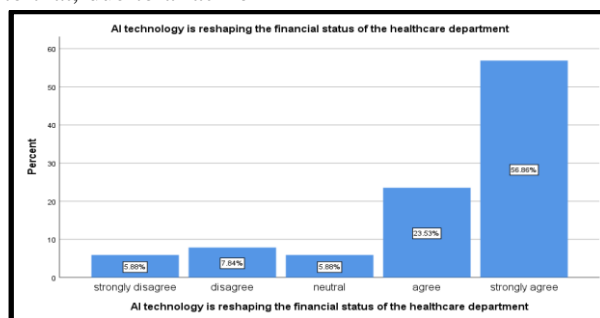
Figure 3.12: AI technology is reshaping the financial status of the healthcare department (Source: SPSS)

Depending on the above bar graph, it has been shown that **56.86%** of the population "strongly agreed" and **23.53%** of the population "agreed" regarding the seventh declaration of "AI technology is reshaping the financial status of the healthcare department". Thus, **5.88%** of the population did not interest to answer it as they had no such knowledge about this matter. In opposition, **7.84%** of the population is strongly denied and **5.88%** of the population is denied.
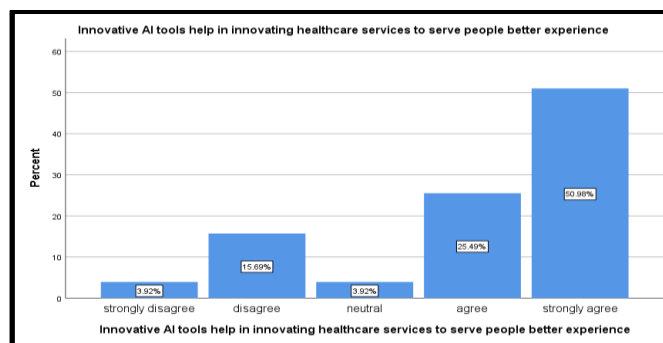
Figure 3.13: Innovative AI tools help in innovating healthcare services to serve people with a better experience (Source: SPSS)

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According to the above graph, the ratio has become **50.98%** who is "strongly agreed" and **25.49%** becomes "agreed" regarding the eighth declaration of "innovative AI tools help in innovating healthcare services to serve people with a better experience". Thus, due to having proper experience and knowledge regarding innovative advancements of AI tools, 3.92% of the population in the survey preferred to remain silent to indicate that they had no such knowledge about this matter. Contradictory, **15.69%** of the population is strongly denied and **3.92%** of the population is denied.

Regression analysis

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.977ᵃ	.954	.946	.258

a. Predictors: (Constant), Innovative AI tools help in innovating healthcare services to serve people better experience , AI technology helps modernise healthcare environments and promote safe efficiency in care settings, Both regulatory requirements and customer demand have become fulfilled within the collaboration of AI technology , AI technologies and their biomedical applications are facing challenges in treatment processes, AI technology is reshaping the financial status of the healthcare department , AI technology is continuously improving healthcare operations, The role of AI technology is outstanding in innovation of advance medical equipment

Figure 3.14: Model summary analysis (Source: SPSS)

The "model summary analysis" table is indicating a positive relationship among research variables. Depending on the "R-square" and "R-value" this table is generally analysed and indicates whether the research variables are valid or not [13]. Valid data is very important for the SPSS analysis process as it is the main identification of the final result. In the above table, the "R-square" and "R-value" becomes **0.954** and **0.977** respectively, and based on proper rules, the data measuring is done. It shows a "positive relationship" between "research variables".

ANOVAᵃ

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	59.055	7	8.436	126.556	.000ᵇ
	Residual	2.866	43	.067		
	Total	61.922	50			

a. Dependent Variable: Artificial intelligence (AI) is rapidly changing medical practice by inventing modern devices

b. Predictors: (Constant), Innovative AI tools help in innovating healthcare services to serve people better experience , AI technology helps modernise healthcare environments and promote safe efficiency in care settings, Both regulatory requirements and customer demand have become fulfilled within the collaboration of AI technology , AI technologies and their biomedical applications are facing challenges in treatment processes, AI technology is reshaping the financial status of the healthcare department , AI technology is continuously improving healthcare operations, The role of AI technology is outstanding in innovation of advance medical equipment

Figure 3.15: ANOVA analysis (Source: SPSS)

The "ANOVA analysis" table is entirely dependent on "significant value" as it shows whether they are correct or not. Generally, in any SPSS analysis, indicating both the "systematic factors" as well as the "random factors", it can be identified as ideal [14]. According to the rule, if the "significant value" becomes <0.001, the collected data can be accepted. In the above table, the "significant value" has become **0** which is less than **0.001 (0<0.001)**. These values are showing that all the data collected from the survey are valid.

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Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.084	.155		.545	.589
	The role of AI technology is outstanding in innovation of advance medical equipment	-.032	.160	-.037	-.199	.843
	AI technology is continuously improving healthcare operations	-.248	.140	-.270	-1.772	.083
	AI technologies and their biomedical applications are facing challenges in treatment processes	.434	.106	.531	4.075	.000
	AI technology helps modernise healthcare environments and promote safe efficiency in care settings	.632	.095	.571	6.672	.000
	Both regulatory requirements and customer demand have become fulfilled within the collaboration of AI technology	-.050	.100	-.062	-.500	.620
	AI technology is reshaping the financial status of the healthcare department	.521	.125	.567	4.177	.000
	Innovative AI tools help in innovating healthcare services to serve people better experience	-.274	.167	-.308	-1.640	.108

a. Dependent Variable: Artificial intelligence (AI) is rapidly changing medical practice by inventing modern devices

Figure 3.16: Coefficient table (Source: SPSS)

"Coefficient table" refers to the estimation of the coded model that is associated with the research variables. The "coefficient table" is mainly depending on the "significant value" and its individual row highlights each response of the research variables [15]. Basically, it describes the size and direction of the relationship and according to this table, the research variables have become valid and authentic. Similarly, according to the above table, it has been identified that there is a positive connection between the research variables of this research topic.

Reliability and validity test

Reliability Statistics

Cronbach's Alpha	N of Items
.985	8

Figure 3.17: Reliability test (Source: SPSS)

In order to represent the authenticity of the entire research process the "reliability test" is the most vital table in the SPSS process [16]. According to the rule, if the "Cronbach's Alpha" value becomes larger compared to "0.70 (value > 0.70)", the reliability test has become valid. In this table, the "Cronbach's Alpha" value becomes *0.985* which is also greater than 0.70 *(0.985 > 0.70)* and tells the data is reliable and valid.

4. Discussion

Following the entire above analysis, it can be stated that the maximum number of people are experiencing the advantage of "Artificial Intelligence" technology and its effectiveness in the medical healthcare process. It has been identified by the majority of people that AI technology is capable of working substitute for human work as it is able to learn human behaviour and attitude. In addition to that, according to the survey result, it has become identified that most people have realised that AI technology is continuously making the system of healthcare operations better and more efficient than enhancing the scope for future growth [17]. AI technology has the capability to select the right and appropriate algorithms which

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are effective in measuring any activity. Along with this, it also has a self-correction capability to enhance the performance and quality of the system. However, AI technology makes healthcare facilities effective and efficient by implementing machine learning algorithms.

Observing the medical sector growth and the response of the survey participants, it has become ensured that "Artificial intelligence (AI)" is rapidly changing medical practice by inventing modern devices. Implementing AI technology in healthcare devices improves the effectiveness and productivity of that device and consequently helps people to get good healthcare services [18]. Most of the technological devices are used in healthcare sectors, trying to involve AI technology to improve the treatment process and make it more dependable. AI technology is associated with a wide range of technological system that is capable of managing diverse aspects to present the treatment process as a ground-breaking discovery. In many medical cases where it is not possible for an individual to appoint for a twenty-four-hour of observation, this facility is easily available with this advanced technology device. In one word it can be mentioned that AI technological devices give huge benefits in improving business models and healthcare facilities all over the world.

AI technology is one of them that possesses an ability to improve each and every aspect of human life. The role of AI technology is outstanding in the innovation of advanced medical equipment. Accompanied by the advancements in technology, medical devices have become modern and able to serve high-quality service. AI technology helps modernise healthcare environments and promote safe efficiency in care settings which is also important as it is an essential requirement for patients [19]. Accompanied by AI technology, the devices are easily detected in the medical department, and the smallest details are easily detected, thereby making the medical system more convenient. By simply detecting these subtleties, many more patients have found the medical system to benefit from the ease of treatment. Besides this, both regulatory requirements and customer demand have become fulfilled within the collaboration of AI technology.

In order for the medical system to achieve a slightly larger process, it is very necessary to identify every little detail that has become flexible with the sake of this modern and advanced technology. In addition to that, it also has been understood that most people are believing that AI technology is reshaping the financial status of the healthcare department. Since advanced technology has made healthcare more accessible, it has been possible to treat more patients in a short period of time. It has helped in improving the financial status of the health department. AI in healthcare is used to analyse medical data and to predict treatment outcomes for patients [20]. However, it also helps healthcare professionals to better understand the pattern and requirements of their patients through in-depth analysis. AI technology is also useful for innovations in the field of healthcare services.Thus, innovative AI tools help in innovating healthcare services to serve people with a better experience. In order to foster improvement in administrative routine tasks by maintaining patients' medical records AI is identified as helpful. Faster service one of the main reasons why human moving to get the best from the technology is to speed up the operations. Its ability to offer convenient administration is also one of the key tool to move on towards the AI technology.

Healthcare facilities are one of them where AI technology can be implemented for the betterment of services but there are some risks and issues that can harm human life as well. Potential errors in technicalities can harm patients and there can be a lack of transparency and trust. Vulnerability to hacking and the data privacy of common people is the main risk behind implementing AI technology in medical equipment. The major causes behind the issue are the lack of technicalities in different aspects of AI technology. The cost of the AI system is very high in recent times and this high price leads technical experts to use low-capable AI systems in different medical equipment and this leads to the different risks of data privacy among individuals [21].

Another cause of arising risks in using AI technology is the cost of healthcare services. Due to the implementation of AI technology in healthcare services, the cost of the service can increase and that can be problematic for common

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people around the world. Technology is everywhere in recent times and due to the involvement of technology cybercrime increased worldwide different research shows that data theft and hacking are increased worldwide along with technological advancement. Complications in the training of healthcare professionals also increased due to advancements in healthcare equipment [22]. The healthcare professionals such as paramedical professionals and nurses are required to train with advanced techniques. Consequently, it can increase the development cost of training centres and institutes.

5. Conclusion

AI technology is the future of technological advancement in the world in different fields. Healthcare facilities in the present time depend on advanced technology and the advancement of technology can be done through the integration of AI technology in medical equipment. From the research, it can be concluded that the AI technology plays a massive role in the advancement of medical equipment and the diagnosis of different diseases. There are various benefits and risk factors in Implementing the AI technology in healthcare facilities around the world. AI technology is also useful for innovations in the field of healthcare services. Implementing AI technology the overall treatment and diagnosis procedure can be improved. Using proper AI technology different pharmaceutical companies can manage their inventory and stock of medicine and also the companies can involve AI technology in the research and development of the medicines. It will be beneficial for people to have a tension-free and healthy life.

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Appendix

Questionnaire

Section 1: Demographic Block

1. Age

a) 18-24

b) 25-35

c) 36-55

d) Up to 55

2. Gender

a) Male

b) Female

c) Others

Section 2: Statements

(Please rate your opinion against the attached statements based on the scale suggested below-

4 = strongly agree, 3 = agree, 2 = neutral, 1 = disagree, 0 = strongly disagree)

Statements	0	1	2	3	4
3. The role of AI technology is outstanding in innovation of advance medical equipment.	4	5	3	14	25
4. Artificial intelligence (AI) is rapidly changing medical practiceby inventing modern devices.	3	2	1	12	33

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5. AI technology is continuously improving healthcare operations.	2	8	3	17	21
6.AI technologies and their biomedical applications arefacing challenges in treatment processes.	6	5	6	16	18
7.AI technology helps modernise healthcare environments and promote safe efficiency in care settings.	2	2	1	7	39
8. Both regulatory requirements and customer demand have become fulfilled within the collaboration of AI technology	8	5	9	16	13
9. AI technology is reshaping the financial status of the healthcare department	3	4	3	12	29
10. Innovative AI tools help in innovating healthcare services to serve people better experience	2	8	2	14	25