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Providing a Model for Digital Transformation of Customer Experience in Acquiring Insurance Services (Case Study: Asia Insurance)

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A B S T R A C T

Objective: This study aims to develop a model for the digital transformation of customer experience in acquiring insurance services, focusing on identifying the causal, intervening, contextual, strategic, central phenomenon, and outcome factors involved in this transformation.

Methodology: The research employs a mixed-methods approach, utilizing both qualitative and quantitative data. The qualitative data were collected through interviews with 10 experts in the insurance industry, and analyzed using manual coding based on the grounded theory method with Strauss and Corbin's systematic approach. The quantitative data were obtained using a questionnaire distributed to insurance customers, and analyzed using Smart PLS software. The study evaluates the structural model fit using R^2, Q^2, and SRMR indicators to ensure the validity and reliability of the proposed model.

Findings: The analysis identified six main factors influencing the digital transformation of customer experience: causal conditions (technological advancements, changing customer expectations, increased competition, economic benefits), central phenomenon (digital transformation of the insurance industry, focus on customer experience, agility and flexibility, focus on customer expectations), intervening conditions (cultural and organizational barriers, data-related challenges, regulatory complexities, cybersecurity concerns), contextual conditions (automation, personalization, e-commerce, multiple experiences, innovations), strategies (customer focus, appropriate technology use, creating a digital culture, forming strategic partnerships, measuring and analyzing results), and outcomes (improved customer satisfaction and loyalty, cost reduction, increased conversion rates, access to new markets, innovation, increased speed and ease of operations, cybersecurity concerns, digital divide, overreliance on technology, job loss, privacy issues).

Conclusion: The study presents a comprehensive model for the digital transformation of customer experience in the insurance industry, validated through qualitative and quantitative analysis. The model highlights the importance of leveraging technological advancements and addressing organizational and regulatory challenges to enhance customer experience.

Keywords: *Digital transformation, digital transformation of customer experience, insurance products, Asia Insurance.*

1 Introduction

Today, the demand for life insurance support continues to rise, as seen in the increasing trend of gross premium income and insurance density. This is partly due to digitization in the insurance sector, leading to increased insurance penetration in countries. Research conducted by Swiss Re Institute shows that 76% of Indonesians are interested in purchasing digital insurance products, especially those offered through fintech and e-commerce. Digital transformation in the insurance industry has led to the emergence of insurtech. Insurtech is a technology or digital platform that provides insurance aggregators, digital agents, online claims features, and marketplaces, integrating these features with big data, blockchain, and the Internet of Things (IoT) (Yaneva, 2021).

Digital transformation has become a top priority for insurance companies worldwide, evolving from a vague future concept to an ongoing and long-term journey. Insurance companies should approach digital transformation incrementally or step-by-step. Digital transformation programs should be broadly applied across the organization and include fundamental principles such as innovation management, emphasis on experience, and new models. These principles can create tangible and intangible values, such as cost reduction, improved customer experience, and efficiency in policy issuance along the insurance companies' supply chain. In recent years, the number of start-ups focusing on the insurance industry has increased, known as insurtech companies. These companies use new technologies to challenge traditional insurance business models. For example, some insurtech companies use data and analytics to offer highly personalized insurance products to customers. Others use the sharing economy to create new insurance products tailored to specific needs, such as ride-sharing or home-sharing. Others focus on streamlining the claims process or making it easier for customers to compare different insurances. The emergence of insurtech has significantly impacted the insurance industry, particularly pushing insurers to rethink their business models and embrace digital transformation. Insurtech companies have also started collaborating with insurers to offer their products and services to a broader audience. For instance, in 2017, Allstate announced a partnership with Lemonade, an insurtech company offering renters and homeowners insurance. Under this partnership, Allstate offers Lemonade's insurance products to its customers (Kelley & Wang, 2021; Liu, 2023).

Digitization is something that various insurance companies have applied to face competition in the digital age, mainly focusing on the effectiveness of digital technologies used to promote insurance products and calculate risk errors. Dolganova et al. (2018) then introduced the term insurtech and explained that insurtech could impact value creation at the company level. Insurtech is an innovation-focused organization whose vision is to provide value to customers and/or insurers by combining infrastructure operations, service delivery, and network operations to disrupt or solve problems across the insurance value chain through technological interaction following the continuous alignment of lean and user-centric approaches (Haghighi Kafash, 2022; Kelley & Wang, 2021). Insurtech aims to provide opportunities focused on flexibility, effectiveness, and accelerating the automation process of routine activities that are cost-effective and focus on user experience to improve knowledge management systems and customer relationships based on empathy for brokers, insurers, and customers (Bahrami et al., 2022; Pauch, 2022; Wang, 2021).

Insurtech essentially implements a digitalization process that, according to Ray and Sabo (2018), has key success factors, namely strong leadership, agile and scalable digital operations, the use of digital business strategies, and continuous monitoring of the digital landscape. Insurtech also has two components in the insurtech transformation capability model: the development of services that must be supported by database infrastructure to create new insurance products and provide digital services, and customer behavior on a product to create new digital insurance services and service development. These two components are then integrated with the customer and partner upgrade network. Insurtech is considered capable of changing how insurance

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companies and customers interact, affecting all business processes, altering existing products, and enabling new product offerings such as cyber risk insurance (Haghighi Kafash, 2022).

Insurtech can be a strategic step for insurance companies to expand the application of the offered insurance products. Insurtech can be used as a digital agent, anti-money laundering, and fraud identification, online finance and logistics, a 24/7 customer service mobile app, online actuary, and underwriter. In the internal operations of the company, insurtech can be used for internal operations, claims processing, and output recording to customer experience and relationship management, and verification. Diagonally and across sections within insurance companies, it can be used for risk management. Insurtech can ensure that all processes are transparent, clear, and aligned with the company's business processes by facilitating communication between employees and all business unit leaders and key users (Wang, 2021).

Digital transformation in the insurance industry can be defined as a cultural, organizational, and operational change in the insurer organization through the intelligent integration of technologies, processes, and digital competencies step by step across all functions and at every level with a strategic approach. According to Capgemini consultants, digital transformation involves implementing technologies to achieve fundamental improvements in organizational performance, productivity, and market share. This refers to changes in customer relationships, internal processes, and value propositions resulting from the use of digital technologies in mobile devices, data analytics tools, social networks, and smart devices combined with traditional technology improvements. This makes digital transformation a step-by-step process related to the initial analysis of the insurance company's needs and their integration through digital technologies into the company's processes and activities (McFarlane, 2019).

Braowski (2018) states that customer experience can be described as "the quality of all consumer encounters with a company's products, services, and brand." While a strong customer experience has been shown to create significant results—more customers, more consumption, more sales, more repurchase activities, and greater loyalty (Yaneva, 2021).

Digital transformation of customer experience involves transforming those experiences through a digital interface such as a laptop/computer, tablet, or smartphone. Online hunting for a product using a mobile app or through company websites, finding the necessary information for any store in the nearest location, searching for technical support information on a smartphone, booking travel tickets, movie/concert/event tickets, and insurance online, etc., fall under digital customer experiences (McFarlane, 2019; Oh et al., 2022).

Previous research literature indicates that acquiring services more conveniently leads to customer loyalty and results in fewer customer complaints. Additionally, extensive literature exists on examining the digitization of the insurance industry in general. Specifically, Yanova (2022) examined the digital transformation of the insurance sector. This report aims to examine the necessity of digital transformation in the insurance sector and the change in business models considering the implementation and expansion of information technology. Through a theoretical summary, the impact of digitization on insurance companies' activities and customer behavior became evident, concluding on the application of technologies to enhance competitive power (Yaneva, 2021). Also, Eckert and Osterrieder (2022) examined Customer Satisfaction Management: Digital Applications for Insurance Companies. The goal of this paper is to provide an integrated view of customer satisfaction management and digital transformation (Eckert & Osterrieder, 2020). Furthermore, Oh et al. (2022) conducted a study titled Determinants for Successful Digital Transformation. The results of this study showed that planned behavioral factors and innovative features positively influence the attitude towards accepting digital transformation and the attitude towards accepting digital transformation positively affects the personal acceptance of digital transformation (Oh et al., 2022). Moreover, Guzman-Ortiz et al. (2020) examined the Impact of Digital Transformation on Individual Job Performance of Insurance Companies in Peru. The aim of this study was to analyze and determine the impact of digital transformation on the individual job performance of insurance companies in Peru (Guzmán-Ortiz et al., 2020).

Considering the above-reviewed literature, the research gap that the present study seeks to fill becomes evident. No research within the country has been observed concerning providing a model for the causal factors of digital transformation and customer experience, especially in the insurance industry. Additionally, the existing studies are mostly review-based, and none of the studies have provided a model for digital transformation of customer experience, which this research aims to innovate by providing the desired model. Also, in the statistical population of the

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present study, no background on digital customer experience and especially providing a model in the context of the present research was observed. Furthermore, the present study will employ a mixed-method (quantitative-qualitative) approach with content analysis to present a model for the digital transformation of customer experience, which is also an innovation in the research methodology of the present study, aiming to fill the research gap in the mentioned areas.

Moreover, there are no academic and specialized studies focusing on the benefits and opportunities of digital programs and the acquisition of services by customers, focusing on key customer touchpoints. By including them, the present research will expand previous studies, discussing and examining the technical perspective of implementing digital technologies and customer experience, and providing a model in this area.

The purpose of the present study is to provide a model for the causal factors of digital transformation of customer experience in acquiring insurance services. The present study aims first to identify the indices and components of digital transformation to provide a model for the digital transformation of customer experience in acquiring insurance services, and then to test the model's fit.

Therefore, the present study seeks to answer the fundamental question:

How is the model of digital transformation of customer experience in acquiring insurance services, and what are its causal, contextual, intervening, strategies, and outcomes factors? And how are they related within insurance?

2 Methods and Materials

The present research, based on its objective, aims to create new knowledge and provide new insights into the digital transformation of customer experience in acquiring insurance services, targeting the scientific community and researchers. The researcher seeks to answer relevant questions, making this research fundamental-developmental in nature. In this study, the qualitative aspect employed interview tools to gather qualitative data, and the quantitative aspect used a questionnaire to gather quantitative data for model validation. The statistical population in the qualitative aspect consisted of all insurance industry experts, while the statistical population in the quantitative aspect consisted of all insurance industry customers. Additionally, purposive sampling was used in the qualitative aspect to select experts. The qualitative aspect continued until theoretical saturation was reached, involving purposive sampling from insurance industry experts. In the quantitative aspect, the sample size was randomly selected from insurance industry customers. The sample size in the qualitative section was selected purposively until consensus was reached, with the sample size being saturated among insurance industry experts, and in the quantitative section, the sample size was calculated using Cochran's formula from insurance industry customers. Grounded theory was used to analyze the qualitative data.

Grounded theory (also known as grounded theory methodology, contextual theory, and foundational theory) is a general, inductive, and interpretive research strategy developed by Glaser and Strauss in 1967. It is generally considered the best example of the inductive approach. Grounded theory is one of the research strategies through which theory is formed based on the main concepts derived from the data. That is, the theory formation process in this strategy moves from particular to general. This kind of theory creation is not "shelf and library-based" but is based on the data from participants who have experienced a process. In another definition, Lapan (2011) views grounded theory as an inductive back-and-forth, interactive, and comparative method for creating a theory. Grounded theory continuously oscillates and refines between data collection and conceptualization.

3 Findings and Results

To design the digital transformation model of customer experience in acquiring insurance services, data from interviews with 10 experts in this field were utilized. The interview data were analyzed using manual coding based on the grounded theory method with Strauss and Corbin's approach.

The analysis of codes based on the classification done according to causal conditions, central phenomenon, contextual factors, intervening conditions, strategies, and consequences is presented in Table 1.

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Table 1

Coding for Digital Transformation of Customer Experience in Insurance Services

Role of Extracted Codes	Selected Code	Core Code	Text	Interview Number
Causal Conditions	Technological advancements	Growth and penetration of the Internet and smartphones	The Internet and smartphones have made access to information and services easier than ever for customers. They can easily review insurance company websites and apps to compare prices, purchase insurance, manage accounts, and report claims without needing to visit in person or call.	3
		Increased access to data and analysis	With access to vast amounts of customer data, such as demographic information, insurance history, and online behaviors, insurance companies can gain a deeper understanding of their needs and preferences. This helps them offer more accurate and relevant insurance products and services tailored to each customer's individual needs. Data analysis enables insurance companies to create more personalized experiences for their customers.	5
	Changing Customer Expectations	Increasing demand for convenience and accessibility	Today's customers want insurance experiences that are convenient and accessible. They want to manage their accounts easily and quickly, pay their premiums, file claims, and communicate with their insurance company through various channels such as websites, mobile apps, or chatbots.	9
		Desire for personalized and real-time interactions	Customers want personalized interactions with their insurance companies. They want products tailored to their individual needs and want quick and efficient responses to their questions and concerns. Insurance companies can use customer data to offer insurance products and services tailored to each customer's individual needs. Additionally, chatbots and virtual assistants can provide 24/7 responses to customer queries and help them complete their requests.	2
		Expectation of a frictionless experience	Customers expect their insurance experience to be frictionless. They do not want to repeat their information multiple times or go through complex and time-consuming processes. They want quick and easy access to what they need. Automation can simplify tasks such as claims processing and policy issuance.	10
	Increased Competition	Entry of new players into the insurance industry, such as technology companies (fintech)	The entry of new players into the insurance industry, especially technology companies (fintechs), is one of the most significant trends in digital transformation in this industry. This presents multiple challenges and opportunities for traditional insurance companies.	8
		Pressure to offer innovative products and services	Today's customers want innovative products and services from their insurance companies. They seek products tailored to their individual needs that help them achieve their goals more efficiently and effectively. Insurance companies must constantly innovate to meet these expectations.	6
		Need for differentiation in the market	With the increasing number of insurance companies in the market, differentiating from competitors becomes more challenging. Insurance companies must find ways to distinguish themselves to attract customers and maintain their market share.	7
	Economic Benefits	Cost reduction through automation and efficiency	Digital technologies such as robotic process automation (RPA) and artificial intelligence (AI) can be used to automate many manual tasks currently performed by insurance employees. This can lead to significant cost savings and increased efficiency.	4
		Increased customer retention and loyalty	A good customer experience is essential for customer retention and loyalty. Digital transformation can help insurance companies provide better customer experiences through several methods, including: * Providing 24/7 services through chatbots and virtual assistants * Personalizing products and services to meet each customer's individual needs * Offering fast and easy claims processes. Customers who have a positive experience with their insurance company are more likely to stay with that company and renew their policies. Additionally, digital transformation can also help insurance companies create new revenue opportunities.	1
		Increased new revenue opportunities		
Contextual Factors	Automation	Automating manual tasks such as data entry and claims processing	Automating manual tasks such as data entry and claims processing can significantly increase the speed and efficiency of insurance processes.	1
		Using chatbots and virtual assistants to provide customer service	Chatbots and virtual assistants can provide support 24/7, which is very useful for customers needing help outside regular business hours.	2

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		Using AI to personalize customer interactions	AI can analyze customer data such as insurance history, online behavior, and demographic profiles to offer relevant offers and discounts tailored to each customer's individual needs. This can help increase conversion rates and customer satisfaction. AI can help reduce costs and increase profitability.	3
	Personalization	Offering products and services tailored to individual customer needs	Insurance companies can use data collected through websites, apps, and wearable devices to create detailed profiles of each customer's needs and preferences. This information can be used to offer insurance products and services specifically designed for each customer's needs. Using data analysis, insurance companies can automatically provide insurance offers based on each customer's individual needs and preferences.	4
		Using data analysis to better understand customer behavior	Insurance companies can use data analysis to identify their customers' needs and preferences. This information can be used to develop new products and services, improve marketing and advertising, and provide more personalized customer service.	5
		Offering targeted offers and discounts	By using data collected through websites, apps, and wearable devices, insurance companies can create detailed profiles of each customer's needs and preferences. This information can be used to offer offers and discounts specifically tailored to each customer's needs and interests.	6
	E-commerce	Enabling online purchase and management of insurance policies	In my opinion, buying and managing insurance policies online is much more convenient than traditional methods. Customers can purchase insurance and manage their accounts at any time and from any place using their personal computer, tablet, or smartphone. Online insurance purchases can be much faster than traditional methods. Customers can buy insurance in minutes by answering a few simple questions.	7
		Providing self-service options for customers	Self-service options allow customers to perform various tasks independently without needing to contact an insurance agent. This can help save time and increase customer convenience. Nowadays, customers increasingly expect to interact with companies through digital channels. The insurance industry is no exception, and insurance companies increasingly use digital channels such as social media to interact with their customers. Using digital channels to interact with customers is an essential part of digitizing the customer experience in the insurance industry. By using digital channels, insurance companies can provide better services to their customers, increase engagement, and reduce costs.	
		Using digital channels like social media to interact with customers		
	Multiple Experiences	Providing customer support across various channels such as phone, email, and chat	Providing customer support across various channels such as phone, email, and chat is a critical area in digitizing the customer experience in the insurance industry. Creating seamless customer experiences across all touchpoints is also a critical area in digitizing the customer experience in the insurance industry.	8
		Creating seamless customer experiences across all touchpoints		
		Using data to provide personalized experiences across each channel	Using data to provide personalized experiences across each channel is a critical area in digitizing the customer experience in the insurance industry. Developing new technology-based products and services is also a critical area in digitizing the customer experience in the insurance industry.	9
	Innovations	Developing new technology-based products and services		
		Using technology to create new business models	Using technology to create new business models is a critical area in digitizing the customer experience in the insurance industry. This means that insurance companies can use technology to create new ways to offer their products and services and generate revenue. Experimenting with emerging technologies such as AI and blockchain is also a critical area in digitizing the customer experience in the insurance industry.	10
		Experimenting with emerging technologies like AI and blockchain		
Intervening Conditions	Cultural and Organizational Barriers	Resistance to change among employees and leadership	Some employees and leaders may resist change because they fear new technologies and how they will affect their jobs. Overcoming this resistance is essential for the success of any digital transformation initiative.	2

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		Culture of risk aversion	The insurance industry has traditionally been conservative and highly risk-averse. This can make companies hesitant to invest in new and innovative technologies essential for digital transformation success.	2
		Lack of customer focus	Some insurance companies still focus on their internal processes rather than their customers' needs and wants. This can lead to poor customer experiences and missed opportunities for growth.	3
	Data-Related Challenges	Poor data quality and integration	The insurance industry collects vast amounts of data, but this data is often of poor quality and fragmented. This can make data analysis and use for improving customer experience challenging. Additionally, different insurance systems are often not integrated, making accessing the data needed to provide personalized customer experiences difficult.	5
		Privacy and security issues	The insurance industry is obliged to protect its customers' sensitive data.	4
		Lack of data analytics	Insurance companies collect a lot of data, but many do not use this data to gain insights into their customers and improve their experience. Data analysis can help insurance companies better understand their customers' needs and wants, identify new opportunities to improve products and services, and provide more personalized customer experiences.	8
	Regulatory Complexities	Stringent and evolving regulations	The insurance industry is highly regulated by the government, and insurance companies must comply with a complex and evolving set of laws and regulations. This can make digital transformation challenging, as companies must ensure that new technologies and initiatives comply with existing laws and regulations. Additionally, uncertainty about interpreting laws and regulations governing the insurance industry is often complex and ambiguous, making them challenging to interpret.	6
		Uncertainty about interpreting laws		
		High compliance costs	Complying with stringent regulations can be costly for insurance companies. This is particularly challenging for smaller companies that may not have the resources to keep up with the latest regulatory changes and implement the necessary measures to comply with them.	7
	Cybersecurity Concerns	Increasing cyber threats	As insurance companies become more reliant on digital technologies, they are increasingly at risk of cyberattacks. These attacks can lead to data breaches, theft of information, and operational disruptions, such as malware, phishing, and denial-of-service attacks.	9
		Risk of data breaches	Data breaches occur when personal or confidential information is exposed, used, or stolen without authorization. Data breaches can be costly and damaging for insurance companies, leading to customer loss, reputational damage, and legal penalties. Companies must also train their employees on identifying and preventing cyber threats.	10
		Need for investment in cybersecurity		
Strategies	Customer Focus	Understanding customers' needs and expectations	One of the fundamental strategies for enhancing the customer experience in this industry is deeply understanding their needs and expectations. By using digital tools and methods, insurance companies can collect valuable information about their customers. Mapping the customer experiences is a crucial step in digitizing the customer experience in the insurance industry. By deeply understanding customers' needs and expectations at each touchpoint, insurance companies can provide their services more effectively and achieve sustainable success. Collecting customer feedback is a core element of digitizing the customer experience in the insurance industry. By receiving customers' opinions and suggestions, insurance companies can identify their strengths and weaknesses and continuously improve their services.	8
		Mapping customer experiences across all touchpoints		
		Seeking customer feedback		
	Using Appropriate Technologies	Utilizing new and emerging technologies	Using new technologies such as AI, machine learning, blockchain, and IoT to improve customer experience... Insurance companies that effectively use these technologies can create a unique and engaging digital experience for their customers and surpass their competitors. Additionally, in the digital age, having a robust digital platform is essential for any business, especially in the insurance industry. This platform can serve as the primary hub for customer interactions, providing a seamless and hassle-free experience across all touchpoints.	6

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		Creating a robust digital platform		
		Using data to personalize customer interactions and offer targeted offers and discounts	In my opinion, in the digital world, using data to personalize customer interactions and offer targeted offers and discounts has become one of the key strategies in the insurance industry. By analyzing various data, insurance companies can gain a deeper understanding of each customer's needs, preferences, and behavior, thereby creating a unique and valuable experience for them. By effectively using data, insurance companies can become customer-centric and achieve sustainable success in today's competitive world.	9
	Creating a Digital Culture	Commitment to using technology	Commitment to using technology to digitize the customer experience in the insurance industry is essential. Insurance companies actively using new technologies in all aspects of their operations can enhance the digital customer experience. With a commitment to using technology, insurance companies can achieve sustainable success in today's changing world and create an ideal experience for their customers.	7
		Providing necessary training on using new technologies to employees		
		Creating an innovative environment for presenting new ideas	In the digital age, creating an innovative environment to promote new ideas in the insurance industry is essential. Insurance companies should create an innovative environment where employees are encouraged to present new ideas to improve the customer experience.	4
	Creating Strategic Partnerships	Collaborating with other companies and organizations to provide a more integrated customer experience	Today, customers expect a seamless and hassle-free experience in all their interactions with companies, including insurance companies. By collaborating with other companies and organizations, insurance companies can offer an ideal digital experience to their customers, achieve sustainable success in today's competitive market, and play a key role in the future of the insurance industry.	3
		Collaborating with fintechs and other innovative companies to develop new products and services	In the digital age, collaborating with fintechs and other innovative companies is a golden opportunity for insurance companies to develop new products and services and provide a unique experience for customers. By collaborating with fintechs and other innovative companies, insurance companies can achieve sustainable success in the digital age and play a leading role in the future of the insurance industry.	5
		Collaborating with universities and research centers to conduct customer experience research	Collaborating with universities and research centers to conduct customer experience research is essential. This can help insurance companies gain a deeper understanding of customers' needs, expectations, and behavior and provide an ideal experience. By collaborating with universities and research centers, insurance companies can offer an ideal digital experience to their customers, achieve sustainable success in today's competitive market, and play a key role in the future of the insurance industry.	2
	Measuring and Analyzing Results	Establishing key performance indicators (KPIs) to measure the success of digital initiatives	Establishing key performance indicators to measure the success of digital initiatives helps insurance companies monitor the effectiveness of their efforts, track progress, and adjust plans if needed.	1
		Regularly collecting and analyzing data to track progress	By regularly collecting and analyzing data, insurance companies can provide an ideal digital experience to their customers, achieve sustainable success in today's competitive market, and play a leading role in the future of the insurance industry. Data collection and analysis are complex processes requiring investment in appropriate infrastructure and human resources. However, the benefits for insurance companies are significant. Regularly collect and analyze data to track progress and make changes if needed. Also, use analytics to identify new opportunities to improve the customer experience.	10
		Using analytics to identify new opportunities to improve the customer experience		
Consequences	Positive Outcomes	Improved customer satisfaction and loyalty	Digitizing the customer experience plays a key role in customer satisfaction and loyalty in the insurance industry. Digitizing the customer experience is a complex process that requires investment in appropriate infrastructure and human resources. However, the benefits for insurance companies are significant. By digitizing the customer experience and focusing on customer satisfaction and loyalty, insurance companies can achieve sustainable success in the digital age and play a key role in the future of the insurance industry.	4

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		Cost reduction	One of the sweet fruits of digitizing the customer experience in the insurance industry is cost reduction. In the digital age, digitizing the customer experience in the insurance industry brings multiple benefits.	9
		Increased conversion rate	Insurance companies that successfully digitize the customer experience can increase their conversion rate through various methods. Increasing the conversion rate means increasing the number of potential customers who become actual customers. This can lead to a significant increase in revenue for insurance companies.	6
		Access to new markets	Digitizing the customer experience in the insurance industry brings multiple benefits, one of the most important being opening the doors to new markets. Insurance companies that successfully digitize the customer experience can access new markets in various ways.	3
		Innovation	Insurance companies that successfully digitize the customer experience can create innovation in their business through various methods. Increasing speed and ease in operations is another benefit of digitizing the customer experience in insurance. Increased speed and ease in operations can lead to higher customer satisfaction, lower cancellation rates, and strengthened customer loyalty.	2
		Increased speed and ease of operations		
	Negative Outcomes	Cybersecurity concerns	While digitizing the customer experience in the insurance industry brings multiple benefits, it also presents challenges, one of the most significant being cybersecurity concerns.	1
		Digital divide	The digital divide refers to the unequal access or use of information and communication technology. This can prevent individuals, households, and communities from benefiting from the opportunities offered by the digitized customer experience. In the insurance industry, the digital divide can result in some customers not having access to insurance services.	7
		Overreliance on technology	Overreliance on technology can lead to the human element being forgotten in insurance services. This can reduce customer satisfaction and create a sense of indifference among customers. Additionally, overreliance on technology can create problems for customers without internet access.	8
		Job loss	Automating tasks through technologies such as AI and robotics reduces the need for human employees in some insurance industry jobs. This can lead to unemployment and economic problems for employees and their families. Digitizing the customer experience in the insurance industry is unavoidable.	10
		Privacy issues	Collecting and storing personal customer information, including name, address, date of birth, social security number, and medical history, is essential for providing insurance services. However, this sensitive information must be fully protected to prevent unauthorized access, misuse, and disclosure.	5
Central Phenomenon	Digital Transformation of the Insurance Industry		Digital transformation in the insurance industry provides a platform for transforming the customer experience. Digital transformation in the insurance industry, which includes using advanced technologies such as AI, machine learning, IoT, blockchain, and big data, plays a key role in transforming the customer experience.	9, 7
	Focus on customer experience		In the present era, customer experience has become one of the most important factors in the competition between companies. The insurance industry is no exception, and focusing on customer experience plays a central role in the digital transformation of this industry and will be the beating heart of digital transformation in the insurance industry. Insurance companies seeking success in the digital age must focus on their customers' needs and expectations and create a memorable, secure, and value-creating experience.	3, 4
	Agility and Flexibility	Rapid adaptation to changing customer needs	In today's dynamic world, agility and flexibility are two key factors for success in any business, especially in the insurance industry, which faces rapid changes and diverse customer needs. Digital transformation of customer experience in the insurance industry requires rapid adaptation to changing customer needs and providing innovative solutions. Agile and flexible insurance companies can quickly change their processes and services according to new needs and capitalize on emerging market opportunities.	1, 2, 8
		Providing innovative solutions		
		Changing speed of processes and services according to new needs		

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	Focus on customer expectations	High customer expectations	In the present era, customers have high expectations from insurance companies. They want a personalized, fast, easy, and affordable experience. Digital transformation in the insurance industry is an opportunity for companies to provide this experience by focusing on customer expectations. By continuously meeting and exceeding customer expectations, insurance companies can gain their trust and loyalty and achieve success in digital transformation.	5, 6
		Gaining customer trust and loyalty		

Generally, an R^2 value of 0.75, 0.5, or 0.25 for endogenous latent variables can be described as substantial, moderate, and weak, respectively. Table 2 shows the coefficient of determination for the endogenous constructs of the research model.

Table 2

Coefficient of Determination for Endogenous Constructs in the Research Model

Variable	R^2	Adjusted R^2
Strategies	0.880	0.879
Central Phenomenon	0.891	0.888
Outcomes	0.817	0.813

Based on the findings in Table 2, the values of the coefficient of determination for the dependent variables of the research are presented. The variables, given the coefficient of determination values, fall within the range of 0.5 to 0.88, indicating a very good fit of the structural model in terms of statistical determination coefficients.

In addition to evaluating the magnitude of R^2 as a measure for predictive accuracy, researchers should also assess the Stone-Geisser Q^2 value. This metric is an indicator of the predictive relevance of the model. If the Q^2 value for an endogenous construct is 0.02, 0.15, or 0.35, it indicates weak, moderate, and strong predictive relevance, respectively, with related exogenous constructs. The results in Table 3 indicate appropriate predictive relevance of the model for the endogenous constructs and confirm the fit of the structural model.

Table 3

Q^2 Results for Endogenous Constructs

Variable	Q^2 (=1-SSE/SSO)
Strategies	0.524
Contextual Conditions	0.533
Causal Conditions	0.517
Intervening Conditions	0.522
Central Phenomenon	0.523
Outcomes	0.512

A Q^2 value greater than zero indicates that the model has predictive relevance for an endogenous construct. In contrast, zero or lower values indicate a lack of predictive relevance. The Q^2 values for the research constructs suggest a good and strong fit of the structural model.

When using Smart PLS version 3, we have two model fit indicators, one of which is the Standardized Root Mean Square Residual (SRMR), which should be less than 0.08. If this index is below 0.08, an acceptable fit is achieved. In the present study, this value is 0.066, which is below 0.08. Thus, the model has a very acceptable fit. After analyzing the fit of the measurement and structural models and ultimately the overall model fit, we are allowed to test and reject the research hypotheses.

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Figure 1

Structural Model with Standard Coefficients

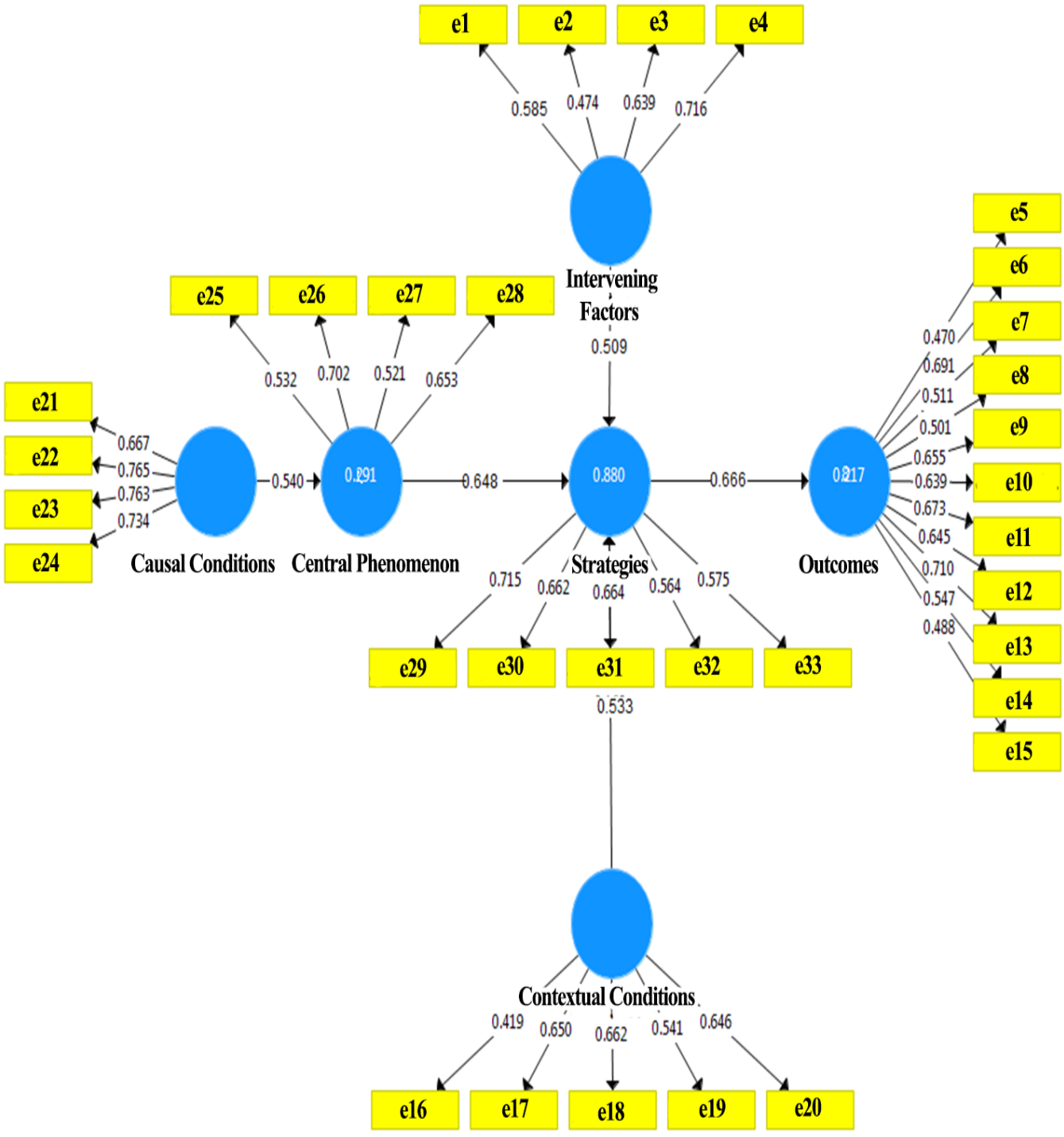

Figure 1, obtained using Smart PLS software, shows the standard coefficients representing the path coefficients or factor loadings between variables and related questions (latent and observable variables). These coefficients indicate the intensity of the influence between the latent variables and their corresponding indicators.

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Figure 2

Structural Model with Significance Values

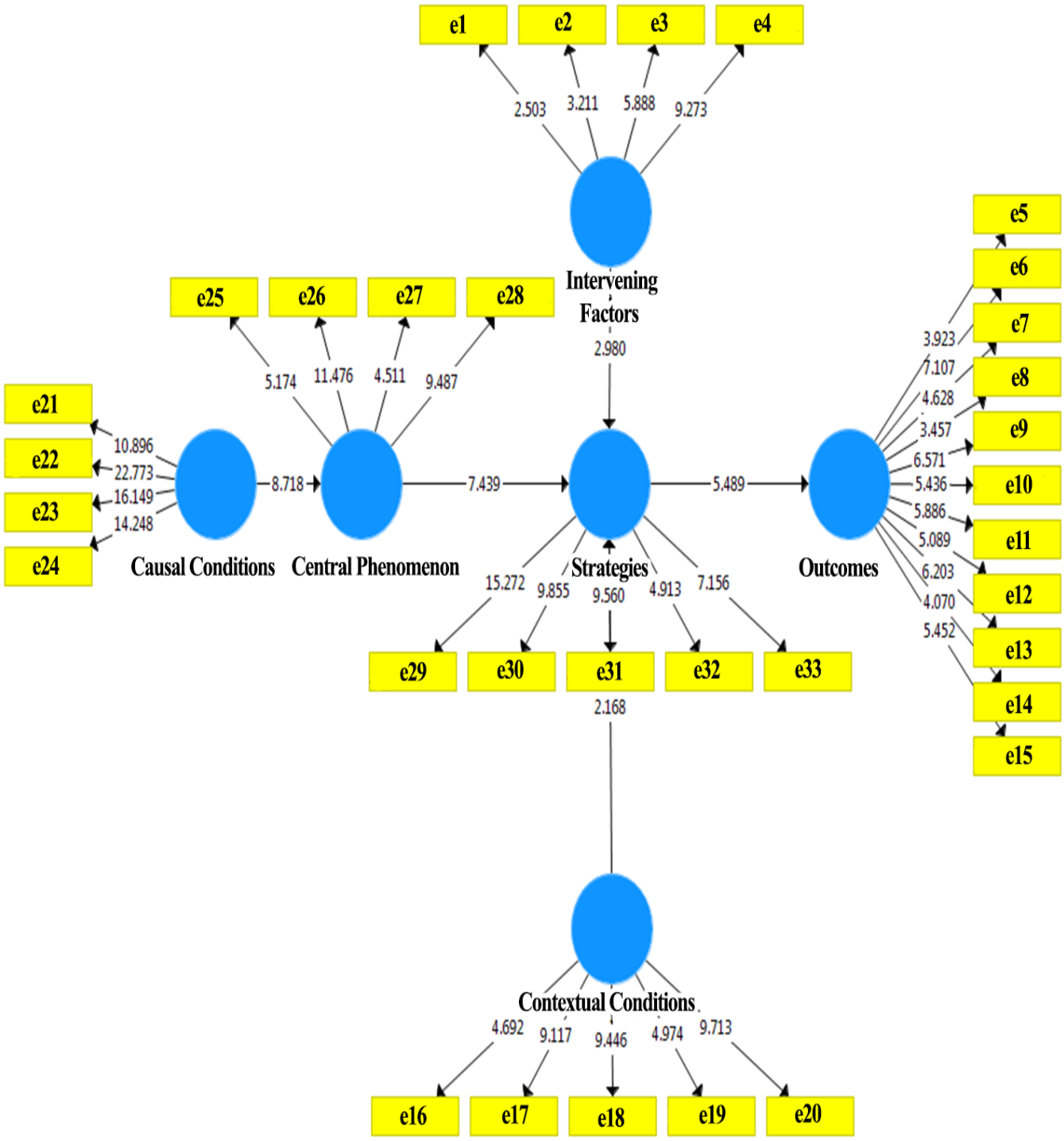

Figure 2 shows the result of this test in terms of t-statistics to demonstrate the significance of these paths. This figure, obtained using Smart PLS software, indicates the proposed t-statistics between variables, all of which are greater than 1.96, indicating a good model fit.

4 Discussion and Conclusion

Digital transformation has revolutionized countless businesses, from manufacturing and retail to hospitality and healthcare. The insurance industry is no exception. To

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address complex challenges and meet customer demands, the industry has embraced digital transformation in various ways. Digital transformation in the insurance industry, powered by emerging technologies like artificial intelligence and the Internet of Things (IoT), enables insurers to respond to customer demands more quickly and efficiently. This leads to improved customer experience and business growth.

Hence, it can be said that this research, extracted from interviews, identified and modeled the digital transformation of customer experience in six factors: causal conditions, intervening factors, contextual conditions, strategic factors, core factors, and outcomes, with 33 indicators modeled at the end and a model presented.

Causal Conditions: Technological advancements, changing customer expectations, increased competition, and economic benefits.

Core Phenomenon: Digital transformation of the insurance industry, focus on customer experience, agility and flexibility, and focus on customer expectations.

Intervening Conditions: Cultural and organizational barriers, data-related challenges, regulatory complexities, and cybersecurity concerns.

Contextual Conditions: Automation, personalization, e-commerce, multiple experiences, and innovations.

Strategies: Customer focus, appropriate technology use, creating a digital culture, forming strategic partnerships, and measuring and analyzing results.

Outcomes: Positive outcomes include improved customer satisfaction and loyalty, cost reduction, increased conversion rates, access to new markets, innovation, and increased speed and ease of operations. Negative outcomes include cybersecurity concerns, digital divide, overreliance on technology, job loss, and privacy issues.

This study identifies the model of digital transformation of customer experience in acquiring insurance services and aligns with the research by Badin et al. (2021) on digital transformation in the insurance industry, its opportunities, challenges, strategies, and economic implications; Arabion (2021) on the impact of digital transformation on underwriting processes and new businesses; and Tonina Yanova (2022) on the digital transformation of the insurance sector. The quantitative results showed that the proposed model has a good fit, and the internal and external validity of the questions were confirmed.

Based on the research questions, the following recommendations are provided to improve the digital transformation of customer experience in acquiring insurance services:

Causal Factors: To improve the digital transformation of customer experience in acquiring insurance services, it is recommended that insurance companies use data collected via the Internet and smartphones to provide more personalized experiences. For example, they can offer insurance proposals based on each customer's individual needs and interests. The Internet and smartphones enable insurance companies to offer new and innovative services, such as using wearable devices to track physical activities and offer discounts to customers with healthy lifestyles. Using the Internet and smartphones can also help insurance companies reduce costs by engaging with customers through online channels instead of traditional methods like direct marketing and print advertising. Insurance companies are advised to offer insurance proposals based on individual needs and interests, dynamically adjust prices based on various factors like driving history or credit score, and personalize marketing content based on each customer's online behavior. Data analysis can help identify and prevent potential fraud patterns, manage risks more effectively, and find ways to quickly and efficiently address common customer complaints.

Contextual Factors: To improve the digital transformation of customer experience in acquiring insurance services, it is recommended to automate manual tasks like data entry and claims processing, use chatbots and virtual assistants for customer service, and use AI to personalize customer interactions. AI can analyze customer data like insurance history, online behavior, and demographic profiles to offer relevant proposals and discounts. This can increase conversion rates and customer satisfaction. Insurance companies can use collected data to create detailed profiles of individual customer needs and preferences and offer tailored insurance products and services. AI and machine learning can dynamically price policies based on various factors and allow customers to build their insurance packages according to their needs and budget. Insurance companies can also use data from wearable devices to offer preventive services to customers, such as fitness programs for those with insufficient physical activity.

Intervening Conditions: To improve the digital transformation of customer experience in acquiring insurance services, it is recommended to overcome resistance to change among employees and leadership by addressing fears related to new technologies and their impact on jobs. Reducing the culture of risk aversion is also essential, as it can encourage companies to invest in new and

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innovative technologies necessary for successful digital transformation.

Strategies: To improve the digital transformation of customer experience in acquiring insurance services, it is recommended to understand customer needs and expectations using digital tools and methods to collect valuable information. In addition to data collection, creating digital communication channels to interact with customers and receive their feedback is crucial. These channels can include websites, apps, social media, email, and live chat. Mapping customer experiences across all touchpoints and collecting customer feedback are essential components of digitizing the customer experience in the insurance industry. Acting on collected feedback is also critical, and sharing it with key stakeholders throughout the organization ensures everyone works towards a common goal of enhancing the customer experience.

Outcomes: To improve the digital transformation of customer experience in acquiring insurance services, it is recommended to enhance customer satisfaction and loyalty through various methods. Insurance companies that successfully digitize the customer experience can achieve cost savings, increased conversion rates, access to new markets, and innovation.

Core Factors: To improve the digital transformation of customer experience in acquiring insurance services, the following actions are recommended: use AI for risk assessment and pricing, use machine learning to predict demand and prevent fraud, use IoT to collect driving data and offer discounts to safe drivers, use blockchain to create more transparent and efficient processes, and use big data to analyze customer behavior and provide relevant proposals.

Future research should examine the impact of digital transformation of customer experience on key organizational variables, such as financial performance of insurance companies, effectiveness, productivity, and overall financial performance.

Authors' Contributions

All authors have contributed significantly to the research process and the development of the manuscript.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

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Declaration of Interest

The authors report no conflict of interest.

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Ethical Considerations

In this research, ethical standards including obtaining informed consent, ensuring privacy and confidentiality were observed.

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