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ANTECEDENTES DA INTENÇÃO DE ADOÇÃO DE CIRURGIA ROBÓTICA

Porto Alegre
2023

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Dissertação no Programa de Mestrado Acadêmico em Tecnologias da Informação e Gestão em Saúde da Universidade Federal de Ciências da Saúde de Porto Alegre.

Orientadora: Profa. Dra. Mellina da Silva Terres

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RESUMO

Diante da complexidade dos serviços na área da saúde, a incorporação de tecnologias vem sendo um desafio para gestores, profissionais e pacientes. Uma dessas inovações são as cirurgias robóticas. ***Objetivo*.** Analisar o impacto dos antecedentes de confiança na instituição; mediado pelo *healthscape*, da confiança interpessoal; da qualidade do relacionamento entre médico e paciente e das características do paciente na adoção de cirurgias robóticas. **Método.** A primeira etapa foi a revisão integrativa de literatura realizada em 2022 no *PubMed*, *Scopus* e *Web of Science*. Após os critérios de inclusão e exclusão, foram selecionados e analisados 13 artigos. Na segunda etapa, foi realizada uma *survey* composta por escalas validadas, aplicada no período de abril a julho de 2022. No total foram considerados 353 questionários válidos para a amostra. Todas as análises consideraram um nível de significância de 5% e foram feitas no *software* SPSS®. **Resultados.** A revisão integrativa revelou que a Inglaterra foi o país com maior número de publicações; em contrapartida, não foram encontrados artigos publicados no Brasil. Fatores como a transparência, a confiança e a autonomia do paciente parecem estar relacionados com a adoção de cirurgia robótica. Para o público pesquisado, a *survey* revelou que a confiança na instituição parece impactar positivamente a adoção de tecnologia robótica pelo paciente. Fatores do *healthscape* também sinalizam impacto positivo na confiança à instituição, com algumas considerações. A qualidade do relacionamento entre médico e paciente parece impactar positivamente a adoção da tecnologia robótica pelo paciente. Estatisticamente, a confiança interpessoal do paciente no médico não teve relação com a adoção de tecnologia. Por fim, as características do paciente também parecem não impactar na adoção de tecnologia robótica pelo paciente. **Conclusão:** Portanto, foi possível verificar que os resultados advindos da revisão integrativa de literatura auxiliaram na investigação sobre os antecedentes da intenção de adoção de cirurgia robótica. Além disso, foi possível corroborar a maioria das hipóteses levantadas na pesquisa prática, e, desta forma, contribuir para o conhecimento na área.

Palavras-chave: cirurgia robótica, confiança, relação médico-paciente, *healthscape* e adoção de tecnologia.

ABSTRACT

The complexity of services in the health area with the incorporation of technologies has been a challenge for managers, professionals, and users. One such innovation is robotic surgery. ***Objective.*** *Analyze the impact of trust antecedents in the institution; mediated by the healthscape of interpersonal trust; the quality of the relationship between doctor and patient and the characteristics of the patient in the adoption of robotic surgeries.* ***Method.*** *The first step was an integrative literature review conducted in 2022 in PubMed, Scopus and Web of Science. After the inclusion and exclusion criteria, 13 articles were selected and analyzed. In the second stage, a survey consisting of validated scales was carried out, applied from April to July 2022. In total, 353 interactions were considered valid for the sample. All analyzes considered a significance level of 5% and were performed using the SPSS® software.* ***Results.*** *The integrative review revealed that England was the country with the highest number of publications*; *nevertheless*, *no articles published in Brazil were found. Factors such as transparency, trust and patient autonomy seem to be related to the adoption of robotic surgery. For the surveyed public, the survey revealed that trust in the institution seems to positively impact the adoption of robotic technology by the patient. The healthscape factors also indicate a positive impact on trust in the institution, with some considerations. The quality of the doctor-patient relationship appears to have a positive impact on patient adoption of robotic technology. Statistically, the patient's interpersonal trust in the doctor was not related to technology adoption. Finally, patient characteristics also do not appear to have an impact on patient adoption of robotic technology.* ***Conclusion:*** *Therefore, it was possible to verify that the results from the integrative literature review helped in the investigation of the antecedents of the intention to adopt robotic surgery. In addition, it was possible to corroborate most of the hypotheses raised in practical research, and thus contribute to knowledge in the area.*

Keywords: *robotic surgery, trust, doctor-patient relationship, healthscape and technology adoption.*

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LISTA DE SIGLAS

IA	Inteligência Artificial
CEP	Comitê de Ética em Pesquisa
CONITEC	Comissão Nacional de Incorporação de Tecnologias no SUS
ISCMPA	Irmandade da Santa Casa de Misericórdia de Porto Alegre
RI	Revisão Integrativa de Literatura
LGPD	Lei Geral de Proteção de Dados
TAM	Technology Acceptance Model
TCLE	Termo de Consentimento Livre e Esclarecido
UFCSPA	Universidade Federal de Ciências da Saúde de Porto Alegre

SUMÁRIO

1 INTRODUÇÃO

Mudanças vividas no atual contexto de serviços de saúde, impulsionadas, entre outros motivos, pelo avanço em tecnologia, têm levado à expansão de práticas bastante inovadoras (MCDERMOTT *et al.*, 2020; ALAIAD e ZHOU, 2013). Instituições de saúde, como hospitais, direcionam cada vez mais seus esforços para melhorar os serviços aos seus pacientes, aumentar a produtividade, garantir segurança, maximizar a qualidade e melhorar as experiências (GOLDSMITH, 2003; OSTROM *et al.* 2015). Tais aspectos são possíveis de serem alcançados através do incremento de tecnologia, que pode estar presente de forma simples ou mais complexa (ALAIAD e ZHOU, 2013).

Alguns exemplos de adoção de tecnologia na área da saúde, por parte dos profissionais de saúde, são a utilização de membros biônicos ou exoesqueletos, a fim de melhorar a força física e realizar o transporte de pacientes (GREWAL *et al.,* 2020). Há também os robôs que possuem uma função social, podendo dar suporte aos pacientes através da presença social (ČAIĆ; MAHR; ODERKEKEN-SCHCRÖDER, 2019; HANCOCK *et al*., 2011), gerando o sentimento de estar na companhia de outra entidade social, relata Heerink *et al.,* (2010) em seus estudos com idosos. Outro exemplo bastante difundido na literatura são os óculos inteligentes, estes recursos podem ser utilizados de forma mais simples como na telemedicina e em usos mais complexos, como durante cirurgias (CICERO *et al*., 2015; WRZESIŃSKA, 2015).

Alguns robôs utilizados pelos profissionais de saúde são os de serviço, descritos como interfaces autônomas e adaptáveis, baseadas em sistemas que interagem, comunicam e obedecem a comandos. Podem ser utilizados para higienização de ambientes ou carga e descarga de objetos, transporte de insumos, além de inúmeras outras aplicações. Há, ainda, sistemas inteligentes com potencial de auxílio a médicos na identificação de doenças, principalmente as raras, a partir do mapeamento dos sintomas e posterior comparação com uma base de dados (WIRTZ *et al*., 2018). Outrossim, podem estar presentes em cirurgias, auxiliando equipes (MCDERMOTT *et al*., 2020).

Especificamente em ambiente cirúrgico, o auxílio de sistemas robóticos já é uma realidade, proporcionando muitas vantagens, como maior precisão e exatidão

na técnica cirúrgica, menor incisão e menor tempo cirúrgico. Estes fatores resultam em um pós-operatório mais rápido e com menos complicações (ALAIAD e ZHOU, 2013). Como exemplo, destaca-se o Sistema Cirúrgico da Vinci, que permite realizar procedimentos cirúrgicos mais complexos e minimamente invasivos através de braços robóticos controlados pelo médico através de computador (DA VINCI SURGERY, 2020; KAO *et al*., 2022).

Com o passar dos anos, esses sistemas foram sendo aperfeiçoados, existindo, hoje, mais de 5.800 instalações de robôs Da Vinci, com o número anual de 8,5 milhões de cirurgias robóticas, somente levando em conta esse sistema (LIATSIKOS *et al*., 2022). Há investimentos significativos sendo implantados na área, com previsão de crescimento aproximado de 25% até 2025. Isso ocorre em um momento em que a expiração das primeiras grandes patentes da área, registradas há mais de vinte anos, acontece, oportunizando a entrada de uma novos entrantes no mercado. Os países considerados líderes do mercado para cirurgia robótica são: Estados Unidos, alguns países da Europa, China, Japão, Austrália, Coreia do Sul, Alemanha, Canadá, Índia e Brasil (HAMILTON; SEVERS, 2020).

No Brasil, o número de robôs cirúrgicos aumentou exponencialmente, passando de três, em 2008, para 80 plataformas, em 2021. São Paulo lidera a lista, seguido pelos estados do Rio de Janeiro, Minas Gerais e Rio Grande do Sul (SOBRACIL, 2022). Segundo a pesquisa de Araújo *et al.*, (2020), no Colégio Brasileiro de Cirurgiões há 133 profissionais certificados em cirurgia robótica. Destes, 84 (63,2%) atuam na área de cirurgia de estômago e esôfago, 81 (60,9%) na área de cirurgia de hérnia, 77 (57,9%) na área de cirurgia colorretal, 62 (46,6%) na área de cirurgia de vesícula biliar, 51 (38,3%) na área de cirurgia de fígado, pâncreas e vias biliares, 25 (18,8%) na área de cirurgia ginecológica, 11 (8,3%) na área de cirurgia urológica, 6 (4,5%) na área de cirurgia torácica e 3 (2,3%) na área de cirurgia de cabeça e pescoço.

Um dos principais locais para realização de cirurgias com sistema robótico no Brasil é o grupo Hospitalar Albert Einstein, que as faz desde 2018, já tendo ultrapassado 7 mil procedimentos[1]. Localmente, os hospitais Moinhos de Vento, Mãe de Deus e Santa Casa de Misericórdia são alguns que já incorporaram esta

[1] https://www.einstein.br/especialidades/cirurgia/programa/cirurgia-robotica

inovação. Nesta última, a principal especialidade cirúrgica a realizar procedimentos é a urologia, atuando no tratamento do câncer de próstata; não obstante, as especialidades de cirurgia bariátrica, coloproctologia, cirurgia do aparelho digestivo, ginecologia e cirurgia torácica também ocuparam um espaço significativo. O hospital, ainda, apresentou um aumento considerável nos procedimentos robóticos em cirurgia pediátrica e cirurgia de cabeça e pescoço[2].

Em relação ao financiamento desta técnicas, sabe-se que, apesar das dificuldades, o Sistema Único de Saúde (SUS) adquiriu e adotou cerca de 5 sistemas robóticos visando ao avanço dos cuidados clínicos, marketing de prestígio e benefícios econômicos indiretos em pesquisas (LUTHRINGER *et al*., 2012). Em contrapartida, segundo um relatório feito pela Comissão Nacional de Incorporação de Tecnologias (CONITEC), não é possível afirmar de forma conclusiva que os benefícios da cirurgia robótica sejam significativos em relação à técnica tradicional. Para uma eventual incorporação da tecnologia, em todos os serviços financiados pelo SUS, devem ser avaliados e considerados, também, os elevados custos associados à sua aquisição e operação, ao longo de toda sua vida útil. Estima-se que devam ser realizados um número mínimo de procedimentos por ano em cada instituição para que a tecnologia possa ser sustentável, devido ao alto custo de aquisição e manutenção. No presente momento, tal processo ainda é inviável. Com base na recomendação da CONITEC, por ora, optou-se pela não incorporação do procedimento de cirurgia robótica em prostatectomia oncológica no âmbito do Sistema Único de Saúde (BRASIL, 2018).

Da mesma forma, ainda não houve a inclusão de procedimentos com sistemas robóticos pela Agência Nacional de Saúde (ANS), órgão que regulamenta a saúde suplementar no Brasil. As seguradoras e operadoras de saúde argumentam que a cirurgia robótica ainda é uma técnica experimental e, por isso, não está coberta pelo Rol de Procedimentos da ANS (FURLANETO *et al.* 2022). Alguns planos autorizam os procedimentos laparoscópicos puros, ficando a cargo do beneficiário a possibilidade de migrar para uma cirurgia robótica, caso tenha interesse em assumir este custo diferencial. De fato, os valores elevados desses

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[2] https://www.santacasa.org.br/noticias/2021/12/28/investimento-em-cirurgia-robotica-marca-o-ano-de-2021-na-santa-casa

procedimentos estão em redução diante da disseminação de robôs pelos hospitais do Brasil. O financiamento pelos planos de saúde é um tema bastante sensível, podendo ser uma barreira para a expansão desta inovação (HUSSAIN *et al*., 2014), por tratar-se de um tópico que envolve questões judiciais, ainda em evolução no país, e que demandam novos estudos para pareceres conclusivos (FURLANETO *et al*. 2022). A inserção de tecnologias em procedimentos e/ou cirurgias com adoção de robôs é o objeto deste estudo.

1.1 TEMA E OBJETIVOS

Ao considerar esses achados advindos da literatura, apresenta-se a questão de pesquisa que norteou o desenvolvimento deste projeto: como os antecedentes da confiança na instituição (*healthscape*); da confiança interpessoal; da qualidade do relacionamento entre médico-paciente e características do paciente podem influenciar na adoção de cirurgias robóticas?

1.1.1 Objetivo Geral

Este tópico está estruturado em dois subitens que tratam, respectivamente, do objetivo principal e dos objetivos específicos presentes neste estudo. O objetivo geral desta pesquisa consiste em analisar o impacto dos antecedentes de confiança na instituição; mediado pelo *healthscape*, da confiança interpessoal; da qualidade do relacionamento entre médico- paciente e das características do paciente na adoção de cirurgias robóticas.

1.1.2 Objetivos Específicos

I. Verificar o impacto positivo da confiança na instituição na adoção de tecnologia robótica pelo paciente;
II. Investigar como os fatores de *design* (a), ambientais (b) e sociais (c) do *healthscape* impactam a confiança na instituição, levando a maior adoção de tecnologia robótica pelo paciente;

III. Analisar o impacto na confiança interpessoal no médico na adoção de tecnologia robótica pelo paciente;
IV. Identificar se a variável qualidade do relacionamento entre médico-paciente impacta positivamente na adoção de tecnologia robótica pelo paciente;
V. Averiguar o impacto das características do paciente na adoção de tecnologia robótica, também pelo paciente.

1.2 JUSTIFICATIVA DO TRABALHO

A adoção da tecnologia robótica em cirurgias é bastante recente (a partir de 1960), com aprendizados oriundos da segunda guerra e da corrida espacial (MORRELL *et al.,* 2021). Seu uso cresce exponencialmente — já são mais de 5.800 instalações de robôs Da Vinci, com o número anual médio de 8,5 milhões de cirurgias robóticas, sendo as áreas de urologia, ginecologia e cirurgia geral os principais campos que utilizam esses sistemas (LIATSIKOS *et al*., 2022). Ademais, nota-se que há um número reduzido de pesquisas envolvendo esta temática, principalmente no Brasil[3]. Validar as evidências baseadas nos primeiros resultados disponíveis, disseminá-las entre usuários em potencial e realizar novos estudos podem sanar ou confirmar as preocupações sobre a cirurgia assistida por robótica (BENMESSAOUD *et al.,* 2011).

A introdução de técnicas mais modernas só é possível com a adoção por parte dos atores envolvidos. Algumas dificuldades para a adoção de tecnologia incluem: expectativas irrealistas, desconfiança e falta de clareza em relação aos benefícios (PINO *et al*., 2015). No estudo de Longoni, Bonezzi e Morewedge (2019) há evidências de que pacientes acreditam que sistemas com uso de IA (Inteligência Artificial) são incapazes de levar em conta a singularidade de cada caso, chamada de negligência à singularidade. Os autores explicam que os consumidores podem estar mais relutantes em utilizar os cuidados de saúde prestados por IA devido ao medo de negligência médica em sintomas, características e circunstâncias. A

[3] Foi realizada uma revisão integrativa de literatura nos períodos de março a dezembro de 2022, a fim de explorar o estado da arte do tema: antecedentes da intenção de adoção de cirurgia robótica. Foram encontrados 13 artigos nas temáticas: cirurgia robótica, adoção de tecnologia e/ou confiança, contendo termos similares na *string* de busca. Nenhum destes artigos foi publicado no Brasil. No artigo 2 consta o detalhamento desta pesquisa.

chamada negligência à singularidade surgiu no contexto em que o paciente espera da IA uma abordagem individualizada, culminando em receios de que suas avaliações possam ter vieses de generalização. A flexibilidade cognitiva, que distingue objetivos inanimados de seres humanos, é a capacidade de adaptar processos cognitivos a condições novas e inesperadas no ambiente. Este é um mecanismo psicológico bastante influente na adoção das novas tecnologias da área da saúde. Desta forma, o estudo sugere que pacientes parecem mais abertos à adoção quando a tecnologia apoia o médico, e não quando o substitui.

Ainda, acrescenta-se a falta de acesso do paciente a informações específicas e detalhadas, que poderiam transmitir maior segurança, se presente (KAO *et al*., 2022). Os prestadores de serviços necessitam entender melhor o que constitui a proposição de valor de um robô a fim de ofertar esta tecnologia ao seu paciente (ČAIĆ; MAHR; ODERKEKEN-SCHCRÖDER, 2019). Para o hospital, esta nova visão dinâmica da inovação promove mais competitividade e, consequentemente, sobrevivência, diante de um cenário cada vez mais volátil e mutável (VAN DE VEN, 1996).

A incorporação de um sistema robótico sinaliza para a comunidade a imagem de que a instituição de saúde é inovadora, "de ponta" e capaz de fornecer um atendimento de “última geração” ao paciente em busca da excelência na gestão da saúde e dos melhores resultados no cuidado (LUTHRINGER *et al*., 2012; BOYS *et al*., 2015; MUADDI e*t al,* 2022). Geralmente associa-se cirurgias robóticas com benefícios, incluindo ser mais rápida, segura, menos dolorosa e com melhores resultados em comparação com a cirurgia minimamente invasiva convencional. Uma descoberta relevante para os administradores hospitalares é que os hospitais com um robô foram percebidos, pela maioria dos entrevistados nos EUA, como melhores do que hospitais sem um robô, significando valor para a instituição. A conceituação proposta atende a uma demanda recente de avanço na compreensão de como as novas tecnologias afetam a cocriação de valor para instituições (ČAIĆ, 2019). Justificada, talvez, pela percepção de que se o hospital pode pagar por uma tecnologia cara como o robô, deve estar indo bem. A reputação do médico também é muito valorizada, desta forma, se ele indicar esta tecnologia, o paciente parece aceitar mais facilmente (BOYS *et al*., 2015). Pondera-se também o alto custo envolvido na adoção desta tecnologia, sendo bastante oneroso para o paciente,

financiada em poucos serviços públicos e reembolsada atualmente apenas por via judicial pelas operadoras de saúde (KAO *et al*., 2022; FURLANETO *et al.,* 2022). Desta forma os pacientes precisarão conhecer os benefícios para que possam optar de forma consciente e segura por esta tecnologia.

1.3 DELINEAMENTO DO ESTUDO

O presente trabalho divide-se em sete capítulos principais. No primeiro capítulo apresenta-se a introdução; no segundo, mostra-se a metodologia com base na revisão sistemática de literatura sobre o tema, além do detalhamento da pesquisa de campo, realizada no hospital supracitado no período de abril a julho de 2022. Nos terceiro e quarto capítulos apresentam-se, respectivamente, os artigos 1 e 2, que serão submetidos para publicação e trazem conteúdo tanto de fundamentação teórica quanto sobre os resultados da pesquisa de campo. No capítulo cinco, apresenta-se os resultados gerais da dissertação. No capítulo seis, a conclusão, as contribuições acadêmicas e oportunidades. Por fim, no capítulo sete, encontram-se as considerações éticas.

2 METODOLOGIA

Apresenta-se a metodologia utilizada nesta pesquisa a fim de compreender os conteúdos da literatura e a sua repercussão na prática referente à cirurgia robótica e aos antecedentes para adoção desta tecnologia. Os próximos subtítulos referem-se, de forma introdutória, às metodologias utilizadas nos Artigos 1 e 2. No primeiro, fez-se uma revisão integrativa de literatura, detalhada no subtítulo 2 do Artigo 1. Já a metodologia do segundo artigo apresenta-se através de uma pesquisa de campo, detalhada no subtítulo 2 do Artigo 2.

2.1 REVISÃO BIBLIOGRÁFICA: REVISÃO INTEGRATIVA DE LITERATURA

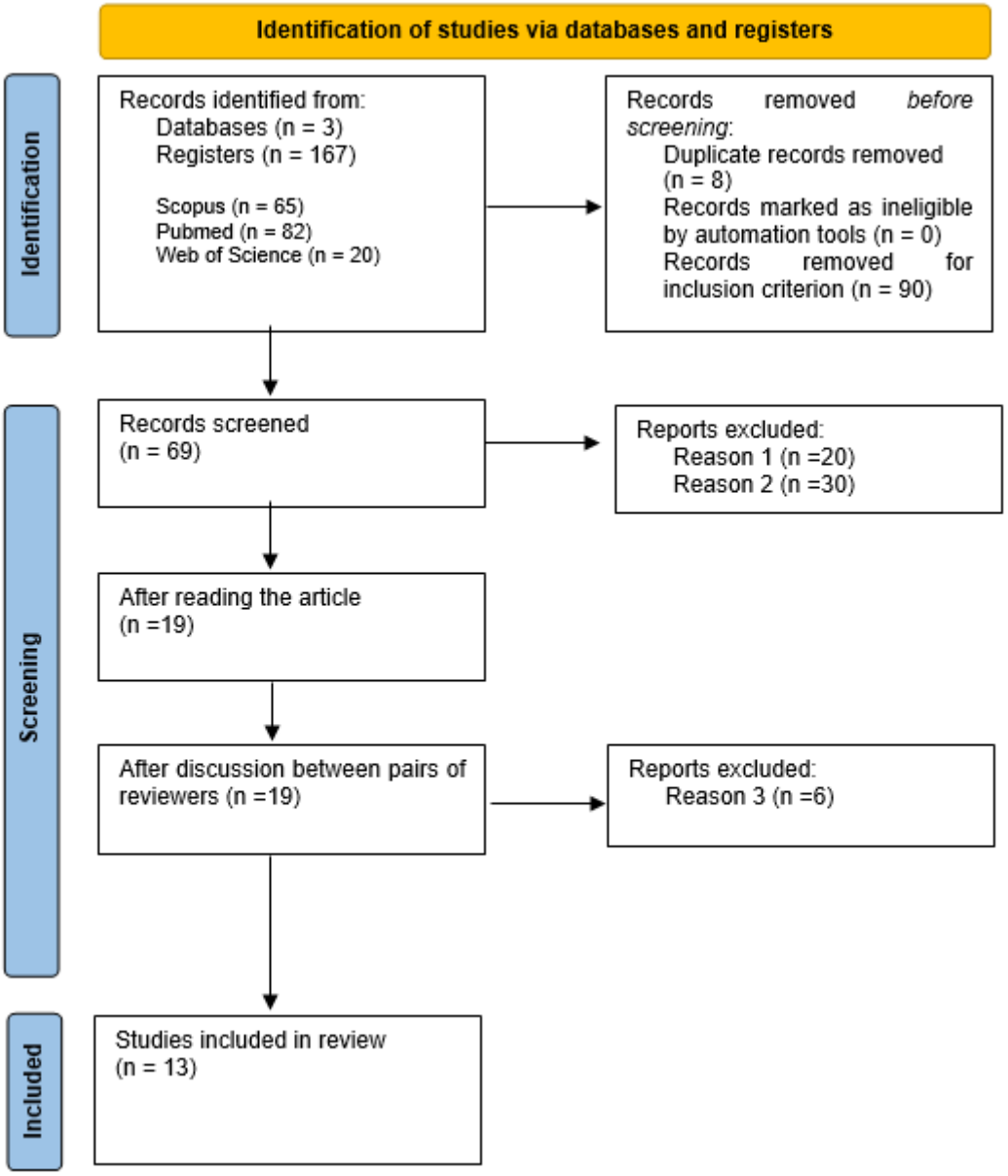
O presente estudo foi realizado por meio de Revisão Integrativa (RI) de literatura, cujo método tem como finalidade sintetizar resultados obtidos em pesquisas sobre um tema ou questão, de maneira sistemática, ordenada e abrangente. Fornece informações mais amplas sobre um assunto/problema, constituindo, assim, um corpo de conhecimento (ERCOLE *et al*., 2014). A RI apresentou notável penetração na área da enfermagem na última década. Essa condição parece estar associada à tendência de compreender o cuidado em saúde, nos âmbitos individual ou coletivo, como um trabalho complexo que requer colaboração e integração de conhecimentos de diversas disciplinas. Essa tendência também é observada na área de cuidado à saúde baseado em evidência, que vem reconhecendo que a combinação de métodos de pesquisa, ainda que sob diferentes matrizes epistemológicas, pode fornecer resultados que beneficiem o cuidado ao paciente, de forma interdisciplinar (SOARES, 2014).

A partir da questão de pesquisa “quais são os antecedentes da utilização da cirurgia robótica pelos pacientes e o que podem revelar sobre a adoção desta modalidade?”, foram escolhidas as palavras-chave a fim de guiar a busca e obter os estudos mais específicos para a revisão, encontradas no Apêndice III. As buscas foram realizadas em 15/09/2022 no *Medline* (via *PubMed*), *Elsevier* (via *Scopus*) e *Clarivate* (via *Web of Science*). As estratégias de busca foram realizadas sob supervisão de uma bibliotecária experiente neste tipo de busca de dados.

A partir desta revisão foram encontrados um total de 167 artigos. Foram selecionados, como critérios de inclusão, artigos em língua inglesa, espanhola e portuguesa, revisados por pares, publicados em periódicos durante os meses de janeiro 2017 a dezembro 2022 e que abordam o tema. Foram excluídos 90 artigos por não preencherem os critérios de inclusão e oito por estarem duplicados. 20 atenderam os critérios de exclusão, como não ter a metodologia adequada para revisão integrativa, e 30 por não englobarem o tema da pesquisa. Após conferência por pares, outros seis foram excluídos. Citam-se como motivos de exclusão — número um: 20 artigos exclusos por não terem a metodologia adequada para revisão de literatura (*systematic reviews*, *systematic mapping*, *case series*, *and experience report*). Número dois: 30 exclusos por não se relacionarem com o tema do projeto.

Número três: realizada leitura completa e após a conferência de pares foi identificado que um artigo apresentava um relato de experiência, além de outros dois que também não possuíam a temática do estudo. Houve um estudo duplicado — o de resultados completos acabou entrando na revisão. Por fim, um último artigo foi excluído por se tratar de *preprint*. A seguir, apresenta-se o Diagrama Prisma (PAGE, 2021) com o detalhamento dos processos da revisão. Resultando em 13 artigos para análise final.

Fluxograma 1 – Diagrama Prisma



Fonte: elaborada pelas autoras (2023).

2.2 PESQUISA DE CAMPO

Este estudo faz parte de um projeto integrado intitulado: *O desenvolvimento da confiança nas diferentes fases do relacionamento em serviços de saúde.* Como desdobramento do projeto maior, esta pesquisa investigou a relação entre confiança na instituição e interpessoal, com maior adoção de tecnologias, especificamente em cirurgia robótica.

A pesquisa foi realizada no Hospital Santa Casa de Misericórdia de Porto Alegre através de um questionário denominado: 'Avaliação da prestação de serviços de saúde', que foi aplicado de forma presencial. Além das pesquisadoras, 6 bolsistas voluntários, alunos da UFCSPA (Universidade Federal de Ciências da Saúde de Porto Alegre), previamente treinados, também participaram da aplicação dos questionários. Cabe ressaltar que as medidas de proteção contra a COVID-19 foram respeitadas durante toda a coleta de dados, além da observância às regras da instituição.

As combinações se deram por e-mail, sendo enviados pela professora orientadora às lideranças dos hospitais e, destas, às gerências e coordenações de recepções, ambulatórios de especialidades médicas e/ou salas de espera de exames. Os seis hospitais do complexo e seus setores foram novamente contatados conforme necessidade de reforço nas coletas. O cronograma de coleta sofreu ajustes ao longo das semanas, sendo preciso solicitar uma prorrogação de prazo.

A obtenção dos questionários aconteceu entre os meses de abril a julho de 2022. Participaram da pesquisa pacientes que aguardavam consulta nos hospitais do complexo. Os primeiros questionários foram realizados acompanhando o paciente, sendo, desta forma, possível testar a compreensão geral do instrumento. A leitura do questionário acabou por tornar a coleta bastante demorada, com duração média de 20 minutos. Com o aprendizado inicial, foram observadas quais perguntas suscitavam mais dúvidas, fez-se ajuste na questão 58, substituindo a frase: "os clientes do hospital são organizados e bem vestidos" pela tradução correta: "os funcionários são arrumados e bem vestidos". Passamos a orientar o paciente logo no início do instrumento sobre as principais dúvidas, como tempo de preenchimento e tópicos gerais. Periodicamente, as pesquisadoras encontravam os bolsistas para alinhamentos e reorganização do cronograma, conforme disponibilidade de

pacientes nos locais da coleta. Ao final do dia, pesquisadoras e bolsistas realizavam a transcrição das respostas em um arquivo Excel.

Apesar de a amostra ter sido composta por 419 pacientes, 20 questionários ficaram incompletos pois, eventualmente, o paciente era chamado para a consulta e não conseguia finalizar. Em outros 21 casos, o instrumento retornou incompleto aos pesquisadores, já não sendo possível revisar com o paciente o motivo do não preenchimento. Desta forma, restaram 378 (90,21%) participantes que completaram todas as escalas relacionadas a este estudo, ou seja, o questionário apresentava informação de idade, sexo e, pelo menos, 29 dos 31 itens respondidos (90%). As respostas faltantes foram substituídas pela resposta média da amostra. Os dados passaram por análise qualificada realizada por estatístico. A partir desta análise, foram excluídos 25 *outliers*, estes foram identificados através do teste de Grubbs (G), realizado por meio da razão entre a diferença, em módulo, de cada resultado com a média de todos os resultados em relação ao desvio padrão. Um valor é considerado como *outlier* quando o valor de “G” é maior que o valor crítico tabelado pelo autor (GRUBBS, 1969). O teste foi realizado nas variáveis de interesse e os casos *outliers* em pelo menos uma das variáveis foram removidos da análise. Ao final desta etapa, restaram 353 questionários válidos.

Para garantir o consentimento dos entrevistados, elaborou-se o Termo de Consentimento Livre e Esclarecido (TCLE), o qual se encontra no Apêndice I. As respostas dos entrevistados se basearam na última consulta médica realizada. Em relação ao profissional de saúde da última consulta, foram realizadas algumas perguntas, a citar: “em geral, quanto tempo aproximadamente dura o atendimento; o atendimento foi realizado através de plano de saúde, particular ou sistema único de saúde?”

Como variáveis dependentes, temos: Intenções de percepção de risco pessoal e adesão ao tratamento (YOUNG, OPPENHEIMER, 2009), contendo perguntas relacionadas à intenção de uso de novas tecnologias e novos tratamentos. A forma como esta escala está descrita no presente texto visa explicar sua utilidade: Percepção de risco e intenção de adesão ao tratamento – adoção da cirurgia robótica.

Já as variáveis independentes, são: Satisfação e qualidade do relacionamento (De Wulf *et al.*, 2001); Confiança interpessoal (adaptado de Dagger,

Danaher, e Gibbs, 2009); *Healthscape*, adaptada de Dcunha, Suresh, Kumar, (2019). Nesta escala, foram avaliados os fatores ambientais, de *design* e sociais; e, Confiança no hospital (adaptado de Dagger, Danaher e Gibbs, 2009). Assim como as variáveis dependentes, para as variáveis independentes também se utilizou a escala Likert de 1 a 7 para as respostas de 1 (concordo totalmente) a 7 (discordo totalmente) para as respostas.

O questionário contém perguntas relacionadas a dados demográficos e de caracterização da amostra, dentre outras variáveis de controle, conforme se pode observar no Apêndice II, onde o questionário é apresentado na íntegra. Os questionários físicos serão armazenados na sede da UFCSPA durante um período de 5 anos.

Na tabela 1 estão apresentadas as características sociodemográficas da amostra. A média de idade dos respondentes foi de 50,7 anos com desvio padrão de 15,3 anos. A maioria era do sexo feminino (64,9%), sendo que 33,7% tinham renda familiar mensal acima de R$ 4.849,00 e 58,7% continham 3 ou mais integrantes na família. Os níveis de escolaridade mais frequentes foram ensino médio completo com 27,5%, seguido de ensino superior completo com 23,8%.

Tabela 1 - Características sociodemográficas da amostra (n=353)

Características	**n (%)**
Idade (anos)[1]	50,7 (15,3)
Gênero	
Feminino	229 (64,9)
Masculino	122 (34,6)
Outro	2 (0,6)
Renda familiar mensal	
Até R$ 1.212	22 (6,2)
De R$ 1.212 até R$ 2.424	58 (16,4)
De R$ 2.425 até R$ 3.636	66 (18,7)
De R$ 3.637 até R$ 4.848	43 (12,2)
De R$ 4.849 até R$ 6.060	52 (14,7)
Acima de R$ 6.061	67 (19,0)

Não quis responder	45 (12,7)
Escolaridade	
Fundamental incompleto	34 (9,6)
Fundamental completo	24 (6,8)
Médio incompleto	18 (5,1)
Médio completo	97 (27,5)
Superior incompleto	40 (11,3)
Superior completo	84 (23,8)
Pós-graduação incompleta	9 (2,5)
Pós-graduação completa	45 (12,7)
Não quis responder	2 (0,5)
Número de integrantes da família	
Um	38 (10,8)
Dois	104 (29,5)
Três	115 (32,6)
Quatro ou mais	92 (26,1)
Não quis responder	4 (1,1)

[1]média (desvio padrão)

Fonte: elaborada pelas autoras (2023).

O detalhamento e resultado completo da pesquisa encontram-se no artigo 2.

2.3 ESTRUTURA DA DISSERTAÇÃO EM ARTIGOS

Apresenta-se a primeira fase do projeto por meio da construção do Artigo 1, escrito com base na revisão integrativa de literatura, a fim de expor as principais evidências científicas a respeito da cirurgia robótica e determinantes para adoção desta tecnologia pelos pacientes. Desta forma, objetivou-se conhecer o estado da arte deste tema. A segunda fase é o Artigo 2, o qual se refere à pesquisa de campo com o objetivo de corroborar as hipóteses levantadas, ou seja, se os antecedentes de confiança na instituição; através do *healthscape,* de confiança interpessoal; de

qualidade no relacionamento entre médico-paciente e características do paciente impactam na adoção de cirurgias robóticas pelos pacientes.

3 ARTIGO 1

"Robotic surgery: an integrative literature review about the intention to adopt this technology"

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Summary. Goal. Map the state of the art of the subject in question through an integrative literature review. **Method.** The present study was carried out through an integrative literature review in order to research the theme "intention to adopt robotic surgery and its determining factors". The study started with a*string* of search in the bases *PubMed*, *Web of Science* It is *Scopus,* It was possible to obtain 167 articles, 13 of which contained the themes: robotic surgery and trust and/or technology in health and/or doctor-patient relationship. **Results.** Of the 13 articles, six are interested in the doctor-patient relationship and the adoption of robotic surgery, while three articles are interested in patient trust in the context of robotic surgery. Three articles address the topic of robotic surgery compared to traditional surgery, a factor that brought important subsidies to the discussion. Of these, two articles did not find clinical benefit in the results. Regarding the countries whose publications were found, England is the country that most published articles on the subject of this research, followed by the USA. One of the authors used technology acceptance theory in his study. **Conclusion.** The country with the greatest interest in the subject was England. Factors such as transparency, trust and patient autonomy seem to influence the doctor-patient relationship, thus interfering with the adoption of robotic surgery.

Key words: trust; health technology, robotic surgery and doctor-patient relationship.

Abstract. Objective. Map the state of the art of the subject in question through an integrative literature review. **Method.** The present study was carried out through an integrative literature review in order to research the topic of "intention to adopt robotic surgery and its determining factors". The study was initiated through a search string in PubMed, Web of Science and Scopus databases — 167 articles were found, of which 13 contained the themes: robotic surgery and trust and/or technology in health and/or doctor-patient relationship. **Results**. Of the 13 articles, six are interested in the doctor-patient relationship and the adoption of robotic surgery, three articles are interested in patient trust in the context of robotic surgery.

Three articles address the topic of robotic surgery compared to traditional surgery, which brought important issues to the discussion. Of these, two articles did not find clinical benefits in the results. In relation to the countries whose publications were found, England is the country with the most articles published on the topic of this research, followed by the USA. One of the authors used technology acceptance theory in his study. **Conclusion.** The country with the greatest interest in the subject was England. Factors such as transparency, trust and patient autonomy seem to influence the doctor-patient relationship, thus interfering with the adoption of robotic surgery.

Keywords: trust; health technology, robotic surgery and doctor-patient relationship.

1 Introduction

The idea of creating a machine capable of performing tasks normally executed by human hands is an old concept, having appeared in very interesting situations. Specifically for the application of robots in surgical practices, the initial concept emerged more than 60 years ago, in the military field (Morrell *et al*., 2021). During military combat, encountering hostile environments with limited access and insufficient assistance is common.The conceptual shift from Golden-Hour", which involved transferring the wounded soldier to the nearest hospital, was replaced by "Golden-minute". Then, the surgical block was transferred closer to the patient, allowing a faster intervention (Zajtchuk *et al*., 1995). The space race was another contributing scenario to the development of robotics and the concept of telepresence. So much Sputnik, the world's first artificial satellite launched into Earth orbit in 1957, as to National Aeronautics and Space Administration (NASA), in 1958, the United States' federal agency dedicated to space exploration, contributed to innovations in this area. The necessity for remote manipulation of instruments resulted in public and private engagement for the development of technology in the area. Thus, robotic telepresence and tele manipulation were essential to ensure the concept of telesurgery (Morrell *et al*., 2021).

Over the years, these systems have been refined, experiencing exponential growth in their utilization. As an example, more than 5,800 installations of Da Vinci robots were carried out, with an annual number of 8.5 million robotic surgeries, only from this system (Liatsikos *et al*., 2022). There are significant investments being implemented in the area, with an estimated growth of approximately 25% and a contribution of US$24 billion by 2025. This occurs at a time when the expiration of the first major patents in the area, registered more than twenty years ago, occurs, allowing the entry of a new generation of innovative companies. The countries considered market leaders for robotic surgery are: United States, some countries in Europe, China, Japan, Australia, South Korea, Germany, Canada, India and Brazil (Hamilton; Severs, 2020).

The most performed robotic surgery procedures encompass the areas of urology, general surgery, including thoracic and gastrointestinal, obstetrics, gynecology, cardiology, otorhinolaryngology and many more (Mirheydar; Parsons, 2013; Manciu *et al.,* 2017; Xue e Liu, 2022).

As facilitators for the entry of these systems, we have stakeholders, surgeons, hospitals, and patients. The wide adherence of surgeons, attracted by the better visual field of the operation, easier access, greater precision and dexterity, also facilitating a better suture and causing less tremor in the hands (Benmessaod; Kharrazi; MacDorman, 2011; Grasso *et al*., 2019). The authors Benmessaoud, Kharrazi and MacDorman (2011) identified that these systems improve the surgeon's ergonomics during surgery and their depth perception. Additionally, these findings align with the authors mentioned earlier, as they highlight that the elimination of hand tremors leads to better patient outcomes.

Regarding hospitals, in addition to the technological appeal, it improves reputation and competitiveness (Van de Ven, 1996; Luthringer *et al.*, 2012), robotic surgery seems to reduce hospitalization time, decrease complication rates and allows surgeons to perform more refined tasks, reducing surgical and hospitalization time (Hussain *et al.*, 2014). This factor is reflected in a higher quality of care, increased patient turnover, and the optimization of operating rooms. However, some authors oppose this position, attributing a longer surgical time to the required learning curve and robot configuration. (Benmessaoud; Kharrazi; MacDorman, 2011; Wang;

Ambani, 2021). It is also evident that some procedures performed by laparoscopy continue to have better outcomes than those performed by robotic surgery (Manciu *et al.*, 2017).

Possibly, acceptance and adoption by patients is a major deciding factor in choosing to use robots in surgery. There is a change in the perception of the care provided, reconfiguring the work team and changing the quality of care, reflect Torrent-Sellens and Jiménez-Zarco (2021). With the aim of deepening the subject on the adoption of new technologies by patients, specifically in robotic surgery, this article seeks to identify, through an integrative literature review, how determinants related to trust in the doctor or in the institution, the quality of the doctor-patient relationship and the patient's characteristics may be strategic elements for the adoption of this technology.

2 Materials and methods

The present study conducted an integrative literature review in order to research the theme "intention to adopt robotic surgery and its determining factors". The integrative literature review method aims to synthesize results obtained in research on a topic or issue, in a systematic, orderly and comprehensive manner. It is classified as integrative since it provides broader information on a subject/problem, thus constituting a body of knowledge. In this way, the researcher can elaborate an integrative review with different purposes, which can be directed to the definition of concepts, review of theories or methodological analysis of the included studies of a particular topic (Ercole *et al.*, 2014). It is observed that the selected literature advances chronologically towards a more comprehensive understanding in two directions, both with regard to previous studies encompassed by IR, and the scope of IR results (Soares, 2014).

First, the research question defined as: What are the antecedents of the use of robotic surgery by patients and what can they reveal about the adoption of this modality? Then, the following databases were chosen for bibliographic research: *PubMed*, *Web of Science* and *Scopus*.

A total of 167 articles were found. As inclusion criteria, articles in English, Spanish and Portuguese, peer-reviewed, published in journals during the period from early 2017 to late 2022 and that address the aforementioned topic were defined. Of these, 90 were excluded for not meeting the inclusion criteria and eight for being duplicated. There were 20 that did not meet the exclusion criteria, such as not having the appropriate methodology for an integrative review (*systematic reviews, systematic mapping, case serie*, It is*experience report*) and 30 for not covering the research topic. After peer review, another 6 were excluded, resulting in 13 articles for analysis.The review steps were carried out from March to December 2022. In Table 2 this process is described relating to the databases where the articles were extracted.

2.1 Data collection and validity assessment

The data extraction period corresponds to the last 5 years: January 2017 to December 2022. In detail, the readability criteria are listed below. Duplicate articles were excluded, those that presented systematic reviews and systematic delistings, that did not have open access, gray literature — which did not constitute an article, although it was classified as such in a journal (editorials, essays, book reviews, etc.) —, articles not available in PDF format, not yet published and not related to the research topic.

2.2 Data analysis

After defining the criteria, the tabulation of data was organized in an Excel spreadsheet with the following information on the articles: base, author, title, journal, date of publication, country, objective, type of study, sample size, gender, and whether it has trust or doctor-patient relationship as the subject. The review was carried out by peers. These data were analyzed for the preparation of results, discussion and conclusion.

2.3 Search strategy

The keywords for the searches were identified from the objective of the study in order to guide the search and obtain the most specific studies for the review (Appendix III). The searches were carried out on 09/15/2022 in the*Medline* (via *PubMed*), *Elsevier* (via *Scopus*) It is *Clarivate* (via *Web of Science*). The search strategies took place under the supervision of a librarian experienced in this type of data search.

Table 2 - Number of articles per database

Basis of Data	Amount General	after criteria of inclusion	duplicates	after criteria of exclusion	Grand total, after criteria
Pubmed	82	40	0	40	6
Web of Science	20	16	8	8	1
Scopus	65	21	0	21	7
Total	**167**	**77**	**8**	**69**	**13**

Source: elaborated by the authors (2023).

3 Results and Discussion

The 13 articles selected for analysis of the results were classified into six categories: title of the article, authors, year, objective and journal published, as shown in Table 3. After the table, the analysis of the results is presented.

Table 3 - Categories for analysis of results

Nº	Title of Article	Authors	Year	Country	Aim	Newspaper	Magazine quality
1	*Effect of Robot-Assisted Radical Cystectomy With Intracorporeal Urinary Diversion vs Open Radical Cystectomy on 90-Day Morbidity and Mortality Among Patients With Bladder Cancer: A Randomized Clinical Trial.*	Catto, J. W. F., Khetrapal, P., Ricciardi, F., Ambler, G., Williams, N. R., Al-Hammouri, T., Khan, M. S., Thurairaja, R., Nair, R., Feber, A., Dixon, S., Nathan, S., Briggs, T., Sridhar, A., Ahmad, I., Bhatt, J., Charlesworth, P., Blick, C., Cumberbatch, M. G. e Hussain, S. A.	2022	England	To assess recovery and morbidity after robot-assisted radical cystectomy with intracorporeal reconstruction compared to open radical cystectomy.	*PEOPLE*	13.353

2	*A comparison of operative and margin outcomes from surgeon learning curves in robot assisted radical prostatectomy in a changing referral practice.*	Jaulim , A. , Srinivasan , A. , Hori , S. , Kumar , N. , Warren , A. Y. and Shah , N. C. .	2018	England	To explore the impact of increasing high-risk referrals on the learning curve of surgeons in robot-assisted radical prostatectomies.	*Annals of the Royal College of Surgeons of England*	1.951
3	*No added value for Computer-Assisted surgery to improve femoral component positioning and Patient Reported Outcomes in Hip Resurfacing Arthroplasty; a multi-center randomized controlled trial.*	Koper, M. C., Reijman, M., van Es, E. M., Waarsing, J. H., Koot, H. W. J., Keizer, S. B., Jansen, I., van Biezen, F. C., Verhaar, J. A. N., e Bos, P. K.	2019	Netherlands	To evaluate Computer-Assisted Femoral Surgery compared to conventional femoral surgery and analyze patient-related outcome measures (PROMS).	*BMC Musculoskelet Disord*	2.562
4	*Does Robotic Milling For Stem Implantation in Cementless THA Result in Improved Outcomes Scores or Survivorship Compared with Hand Rasping? Results of a Randomized Trial at 10 Years.*	Nakamura, N., Sugano, N., Sakai, T., e. Nakahara, I.	2018	Japan	To compare the results of a randomized clinical trial, at a minimum follow-up of 10 years, between robot-assisted nail implantation and hand scraping techniques in relation to Japanese Orthopedic Association clinical outcome scores.	*Clinical orthopaedics and related research*	4.837
5	*Robotic Inguinal vs Transabdominal Laparoscopic Inguinal Hernia*	Prabhu, A. S., Carbonell, A., Hope, W., Warren, J., Higgins, R., Jacob, B., Blatnik, J.,	2020	USA	To determine whether robotic surgery for inguinal hernia	*JAMA surgery*	16.685

	Repair: The RIVAL Randomized Clinical Trial.	Haskins, I., Alkhatib, H., Tastaldi, L., Fafaj. , A., Tu, C., e Rosen, M. J .			repair results in better postoperative outcomes compared to traditional laparoscopic inguinal hernia repairs.		
6	*Extended nursing for the recovery of urinary functions and quality of life after robot-assisted laparoscopic radical prostatectomy: a randomized controlled trial.*	Wang, C., Song, Z., Li, S., e Tai, S.	2018	China	To explore the effects of continuous intervention with nursing care on postoperative urinary control and quality of life in patients with prostate cancer.	*Supportive care in cancer*	3.359
7	*Do People Favor Artificial Intelligence Over Physicians? A Survey Among the General Population and Their View on Artificial Intelligence in Medicine*	Yakar , D. , Ongena , Y. P. , Kwee , T. C. and Haan , M .	2022	Netherlands	To investigate the general population's view of artificial intelligence (AI) in medicine with specific emphasis on 3 areas that have seen great progress in AI research in recent years: Radiology, Robotic Surgery and Dermatology.	*Value in Health*	5.101
8	*Experiences of a "COVID protected" robotic surgical centre for colorectal and urological cancer in the COVID-19*	Huddy, J. R., Crockett, M., Nizar, A. S., Smith, R., Malki, M., Barber, N. e Tilney, H. S.	2022	England	To analyze the results of the evolution of patients in a unit for robotic surgery created in	*Journal of Robotic Surgery*	2.484

	pandemic				order to be protected against viruses during the COVID-19 pandemic.		
9	*When Does Da Vinci Robotic Surgical Systems Come Into Play?*	Kao, H. Y., Yang, Y. C., Hung, Y. H., and Wu, Y. J.	2022	Taiwan	Explore the disposition of patients in relation to Robotic Surgery Systems, using the "Technology Acceptance Model" (TAM) as a theoretical foundation, adding the concept of trust to the discussion.	*Frontiers in Public Health*	6.461
10	*Uptake and accessibility of surgical robotics in England*	Lam, K. Clarke, J., Purkayastha S e Kinross J. M.	2021	England	Examine the adoption of robotic surgery through a questionnaire, as well as determine the volume of the procedure and accessibility in England.	*International Journal of Medical Robotics and Computer Assisted Surgery*	2.483
11	*TECLA—an innovative technical approach for prostate cancer registries*	Christiansen, O., Bratt, O., Haug, E. S., Vaktskjold, A., Selnes, A. e Jordhoy, M.	2019	Norway	To present a code-driven electronic database for patients treated with radical prostatectomy (BECT) in the *Hospital Innlandet* (HI). The aim is to carry out research, quality control and make data available to the	*Scandinavian Journal of Urology*	1.911

					Norwegian National Cancer Registry (CRN).		
12	*Treatment Availability Influences Physicians' Portrayal of Robotic Surgery During Clinical*	Scherr, K. A., Fagerlin, A., Wei, J. T., Williamson, L. D. and Ubel, P. A.	2017	USA	Analyze physicians' descriptions of robotic prostatectomy and open prostatectomy, noting greater detail and concern regarding technique or outcome.	*Health Communication*	3501
13	*Public Perceptions of Artificial intelligence in healthcare: Public perception of robotic surgery*	Anagnoste, S., Biclesanu, I., Teodoroiu, C. e Bellini, F.	2022	Romania	Evaluate public opinion on robotic eye surgery (RES), in terms of: safety, price evolution in the following years and technology as an agent of change in the medical field.	*Proceedings Of The International Conference On Business Excellence*	0,3

Source: prepared by the authors (2023)

It's noteworthy that these articles are written by different authors and are from various magazines. Only JAMA had two publications, one of which was published in JAMA surgery. In terms of publication years, there is one article from 2017, three from 2018, two from 2019, one from 2020, one from 2021, and five from 2022, which had the highest number of publications. Among these 13 articles, 6 are interested in the theme "physician-patient relationship" (Jaulim *et al*., 2018; Buyer *et al*., 2019; Huddy *et al*., 2022; Christiansen *et al*., 2019; Shear *et al*., 2017 of Anagnoste *et al*., 2022). Wang's article *et al.* (2018) is interested in the theme "nurse-patient relationship". The following three articles by Yakar *et al*. (2022), Kao *et al*. (2022) by Lam *et al*. (2021), respectively, are interested in the theme "patient trust in the context of robotic surgery". Finally, three articles address the topic of robotic surgery without being interested in the topics discussed above, being authored by Catto *et al*. (2022); Nakamura *et al*. (2018); Prabhu *et al*. (2020). We decided to keep them in the review due to the interest of these studies in customer satisfaction, quality of life and/or comparison with traditional surgery, a factor that provides important subsidies for the discussion.

Regarding the doctor-patient relationship theme, it appears that, for Yakar *et al.* (2022), ethical and legal issues are as important as the technical performance of these systems for a responsible and successful implementation. Among the ethical priorities, human consent is one of the pillars of the doctor-patient relationship. Kao *et al.* (2022) include the element of trust in the doctor-patient relationship, which may be essential for adherence and quality of treatment. In their study, they reflect that the patient's trust in the doctor is crucial to improve the interaction

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and increase the patient's participation in decision-making about the treatment, in order to decide together with the doctor what will be most appropriate, given the specific conditions of the patient. Still on this topic, Scherr *et al.* (2017) note that patients expect their doctors to present and educate them about all available treatment options, fostering informed decision-making. These results are in line with authors such as Johnson and Grayson (2005) who reinforce the importance of the doctor-patient relationship through empathy. Trust is part of the composition of a strong bond in the doctor-patient relationship and, providing the patient with information so that he is able to decide, in a shared way, what will be best for him, this is a demonstration of respect and care on the part of the professional. These authors point out that elements such as transparency, trust and autonomy are part of the doctor-patient relationship in the adoption of robotic surgery. These results corroborate the findings in the Torrent-Sellens literature et al., (2021), who underscore trust as a crucial precursor in the incorporation of technology in a surgical environment.

Furthermore, in relation to the factors that influence the patient's choice for robotic surgery, the research by Anagnoste stands out *et al.* (2022), in which variables such as: being a Caucasian male, having broadband internet and residing in areas where family income is high are cited as factors significantly associated with confidence in robotic surgery. Therefore, sociodemographic characteristics may be associated with greater adoption of robotic technology. In this perspective, the author Yakar *et al*. (2022) also found that men with higher education, natives and those who were not admitted to a hospital in the last 12 months have greater confidence than women, people with lower educational level or immigrants, in the context of robotic procedures.

It is also noted, in comparative studies, some of the benefits pointed out about robotic surgery, compared to manual surgery: shorter hospitalization time (Catto *et al.*, 2022; Huddy *et al.,* 2022) and decreased hemorrhage (Catto *et al.*, 2022; Jaulim *et al.,* 2018). According to Jaulim *et al* (2018), the surgery took less time, while the study by Catto *et al.* (2022) revealed better quality of life for patients.

However, 2 authors, Nakamura *et al.* (2018); Prabhu *et al.* (2020), did not find clinical benefits in robotic surgery outcomes compared to traditional surgeries. When comparing the robotic approach to inguinal hernia repair with the laparoscopic approach, Prabhu's study *et al.* (2020) reports that the robotic approach incurred higher costs and longer operative time compared to the laparoscopic approach, with greater frustration and no ergonomic benefit for surgeons. Nakamura *et al.* (2018), in their studies on robotic surgeries in orthopedics, found no clinical or radiographic benefit in the robotic technique when comparing robotic milling for the implementation of a collating nail compared to manual scraping, speculating that the improvement of cementless nails, either through design of the nail or by the evolution of the surgical techniques of fixation in videoarthroscopy, is one of the reasons for the lack of findings of difference between the methods. The traditional technique with the use of adequate orthoses seemed to be superior.

Regarding the countries whose publications were found, England is the country that most published articles on the subject of this research. Of the thirteen articles, 4 are English (Catto *et al*., 2022; Jaulim *et al.*, 2018; Huddy *et al.,* 2022; Lam *et al*., 2021), followed by the USA, with 2 articles (Prabhu *et al*., 2020; Shear *et al.*, 2017) and the Netherlands with 2 articles (Koper *et al*., 2019; Fight *et al.*, 2022). The other articles were published in different countries, 1 in Norway (Christiansen *et al*., 2019) and another in Romania (Anagnoste *et al*.; 2022). Finally, 3 were published in eastern countries, 1 in Japan (Nakamura *et al.*, 2018), 1 in China (Wang *et al*., 2018) and 1 in Taiwan (Kao *et al*., 2022). According to Perez *et al*. (2010), based on a series of preliminary studies, countries that introduce a given innovation end up presenting a faster dissemination process, with less time delay until the innovation is accepted. According to the authors, even if there is no communication or imitation between individuals, the level of innovation adoption in a country acts as a signal to consumers in other countries, reducing their risk perceptions and increasing the legitimacy of using the new product. The authors also claim that, in addition to market entry time, the marketing mix, variables demographic, cultural and economic factors have different impacts on the process of adopting new technologies.

Finally, it is worth mentioning the findings related to theories about technology acceptance in the study whose theme of trust in the doctor-patient relationship was found. According to Kao *et al.* (2022), who used the TAM (Technology Acceptance Model), patients' trust in their doctors is considered a central factor in the relationship, important for the effectiveness of treatment and

for patients' understanding of Robotic Surgery Systems. The results of this study found that the relationship of trust between patients and physicians affects patients' understanding of robotic surgery systems and their decisions regarding the procedure. Patients' trust in their doctors determines their willingness to accept their suggestions, while the doctor's empathy helps to preserve trust in the relationship, maintaining the effectiveness of the treatment.

4 Conclusion

After analyzing the articles, it was concluded that England showed the greatest interest in the subject. Factors like transparency, trust and patient autonomy seem to influence the doctor-patient relationship, thus interfering with the adoption of robotic surgery, when so indicated. There was an association, in one of the studies, of the patient's sociodemographic factors, with greater acceptance of the technology being observed in white men, with greater purchasing power. Several articles compared robotic surgery with traditional surgery, observing advantages such as less bleeding during the procedure, shorter intraoperative time, shorter hospital stay and better quality of life for patients. Comparatively, the advantages seem to prevail over the disadvantages, which are present in only 2 studies, which cite higher costs in robotic surgeries, similarity in relation to videosurgery and longer time for learning, in addition to waste. No article related factors of healthscape with greater adoption of robotic technology.

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4 ARTIGO 2

HELLO, DR. ROBOT: ANTECEDENTS OF ROBOTIC SURGERY INTENTION IN HEALTHCARE SERVICE

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ABSTRACT

Objective. Technological solutions in health services grow exponentially**.** The adoption of robotic surgery in surgeries is a very promising innovation, since it seems to provide several advantages, such as access to anatomically difficult areas, reduction of human error, such as tremors of the complex, and vulnerability to fatigue, thus helping the patient to recover more quickly and ensuring that the hospital stay is shorter. When introducing technology in health services, it is necessary to understand how patients will adopt it, with a view to transmitting

safety, maximizing quality, and improving the patient's experience. Therefore, the objective is to analyze the impact of antecedents of robotic surgery adoption. **Method.** A survey with 353 patients in a hospital was performed by the institution's ethical committee. **Results.** The main findings revealed that trust in the institution positively impacts the adoption of robotic surgery by the patient, as well as the quality of the doctor-patient relationship. Design, environmental and social factors of the healthscape also showed a positive inheritance in trust in the institution, with only social factors having a mediating effect on trust in the institution. **Conclusion.** This study revealed that the main antecedents of the adoption of robotic surgery by the patient are trust in the institution, the quality of the doctor-patient relationship, and factors of the health environment, specifically social factors.

Keywords: Trust; technology, robotic surgery, and doctor-patient relationship.

Introduction

Health institutions seek to improve services to their patients, increase productivity, ensure safety, maximize quality and deliver valuable experiences (Ostrom *et al*., 2015). One of the actions to achieve these goals is to offer innovative systems through technology (Boys *et al*., 2016; Muaddi *et al*., 2022). An example of new technology is surgical robotics, which provides many advantages, such as greater precision, and accuracy in the surgical technique, smaller incision and shorter surgical time. These factors may result in a faster postoperative period with fewer complications (Maj *et al*., 2022; Chaouch *et al*., 2023). Social robots in services are an emerging topic in service research and hold promising implications for organizations and users (Caic *et al.*, 2019). The adoption of robots in healthcare services involves affective and well-being perspectives, such as the social robots (Caic *et al*., 2019; Odekerken-Schröder *et al*., 2020), service design (Patricio *et al*.,2020) and more utilitarian

issues such as the clinical efficacy of robotic surgery (Sheetz *et al*., 2020; Maj *et al*., 2022). Automation paves the way for precision surgery and improved safety and opens new possibilities for deploying more robust artificial intelligence models, better imaging modalities and robotics to improve clinical outcomes (Han *et al.*, 2022).

Despite the extensive investment of health services institutions in robots and other technologies, their successful adoption does not depend only on health institutions and professionals, but also on the willingness of patients to use them (Kipnis *et al*., 2022; Odekerken-Schröder *et al*., 2020). Thus, there is a salient and propitious context for research efforts (Grewal *et al*., 2020; De Keyser and Kunz, 2022), with the aim of leading to greater adoption of new technologies by patients.

Studies focused on the incorporation of technology in a surgical environment suggest that trust is possibly a crucial antecedent of the intention to adopt robotic surgery (Torrent-Sellens and Jiménez-Zarco, 2021; Wirtz *et al*., 2018). Patients' trust is not a singular and generalized phenomenon, but a series of relationships based on specific behaviors and expectations; it interferes with the decisions that humans make in uncertain or risky situations, such as critical health conditions (Hancock *et al*., 2011). The quality of the doctor-patient relationship also seems to positively impact patient adoption of robotic surgery (Dagger *et al*., 2009; Palmatier *et al*., 2006; De Wulf *et al*., 2001).

In addition to doctor-patient trust, institutional trust is also investigated, which assumes an even more important role, as it is a relationship that generally involves risks and important consequences for the patient (Wu *et al*., 2005). Furthermore, other determinants seem to influence technology adoption in healthcare such as relationship quality and the healthscape (servicescape in healthcare contexts) (Caic *et al*., 2019; Odekerken-Schröder *et al*., 2020; Yakar *et al*., 2022).

Thus, the objectives of this study are: to verify the impact of trust in the adoption of robotic surgery by the patient; to investigate whether healthscape factors affect trust in the institution, leading to greater adoption of robotic surgery by patients; and analyze whether the quality of the doctor-patient relationship positively impacts the adoption of robotic surgery.

This research adds to the literature, first by investigating the impact trust in the institution and in the service provider (doctor-patient relationship) have in the intentions a patient has to adopt robotic surgery. Second, by investigating the impact of healthscape aspects in the perceptions patients have about using technology in their treatment, we also shed some light into usually overlooked aspects that may influence the adoption of robots in healthcare settings.

Technology in Surgeries

Healthcare providers focus their efforts on improving services, ensuring safety, maximizing quality and improving experiences (Mcdermott *et al*., 2020; Ostrom *et al.*, 2015). Technology plays an important role in the development of health industry, not only in care settings (Kipnis *et al*., 2022), but also in more complex contexts such as surgery (Torrent-Sellens and Jiménez-Zarco, 2021).

One of the first machines used in surgery was the precursor Neuromate, created to perform brain biopsy with precision. Currently, assisted robots already attend to minimally invasive operations (Hockstein *et al*., 2007; Maj *et al*., 2022). In recent years, the Da Vinci surgical system was developed, in which the surgeon performs the procedure through a console that controls mechanical arms remotely. This technology offers the possibility for the robot to be in a different location from where the doctor is (Moschovas *et al*., 2023; Kao *et*

al., 2022).

These innovations are due to the combination of artificial intelligence (AI) with robotics, machine learning, big data, programming, speech recognition, cameras, sensors, biometrics, mobile and cloud technology. They provide several changes and opportunities in performing procedures with a greater degree of precision, scalable movements, and greater amplitude. Furthermore, it may be able to reduce the risk of adverse events, as it is associated with reduced intraoperative time (Torrent-Sellens and Jiménez-Zarco, 2021; Kao *et al*., 2022).

The use of robotic surgery in the perspective of professionals, is also associated with the reduction of technical errors, improving access to areas of the body that are difficult to access and minimizing the potential for human error, such as the surgeon's tremors and vulnerability to fatigue, thus helping the patient to recover faster and ensuring that the patient's hospital stay is shorter (Kao *et al*., 2022; Maj *et al*., 2022). These benefits contribute to the reduction of morbidity rates, in addition to providing financial and time savings, and reducing the psychological costs associated with the process, in addition to a better quality of life for the patient (Torrent-Sellens and Jiménez-Zarco, 2021).

Despite all the positive outcomes of using technological solutions in surgery, the patient makes the ultimate decision. Therefore, it is critical to better understand aspects that influence this choice. Technology adoption in the context of healthcare refers to the intention that a patient has to adopt a certain prescribed treatment involving technology (Young and Oppenheimer, 2009). Previous research in healthcare settings, and more recently about patient adoption of robot-assisted surgery, suggests antecedents such as trust (Kao *et al.*, 2022), healthscape dimensions such as environmental, design and social elements (Kipnis *et al*., 2022; Torrent-Sellens and Jimenez-Zarco, 2021), and relationship aspects (Kipnis *et al*., 2022). These potential antecedents of patient willingness to adopt robotic surgery will be

discussed in the next sessions.

Relationship Quality

Dagger *et al*. (2009) explains that the benefits of creating and maintaining strong relationships between physicians and patients are well established and are equivalent to greater loyalty and retention (Dagger *et al*., 2009), which are important for the maintenance, competitiveness and longevity of organizations. Oliver (2010) states that satisfactory cumulative experiences develop positive attitudes towards the service provider and a preference for him. When there is a relationship, there is also a commitment to repurchase a preferred service, that is, to repeat the experience consistently in the future (Oliver, 2010), thus increasing intentions for future interactions.

The greater the relational strength (relationship quality and amplitude - temporality) the greater the capacity of the relationship to withstand stress or conflicts. Relationship strength is equal to the interplay between relationship quality and relationship breadth, that is, the ability of an interorganizational relationship to withstand stress and conflict so that multiple high-quality relational bonds result in strong, stable and resilient relationships (Palmatier *et al.*, 2006). When the performance of a given facility provider varies greatly according to occasions, customers/patients may be cautious when basing their intentions on continuing a relationship with the organization, as quality is at stake, impacting the experience (Hess *et al.*, 2003).

The construction of relationship quality is reflected by a combination of commitment, trust and satisfaction (De Wulf *et al*., 2001), which in turn boosts relationship strength (De Wulf *et al*., 2001). A higher perceived relationship quality with the service provider increases patient propensity to be willing to use technology in healthcare situations (Chen *et al.*, 2013).

Hess *et al*., (2003) corroborates the authors and emphasizes that the usually the expectations of continuity of the relationship are based on the quality of past services, on the performance of the service and on the number of previous encounters with the organization. Thus, the first hypothesis is proposed:

H1: The quality of the doctor-patient relationship will positively impact patient adoption of robotic surgery.

Interpersonal Trust

Interpersonal trust can be defined as the degree of trust that the subject feels, and their intentions based on the words, actions and decisions of other people can provide the basis for emotional ties that bind individuals (Mcallister, 1995). Trust can be conceptualized under two aspects, or two dimensions (Van Door *et al*., 2017): trust based on affection and trust based on cognition.

Trust based on affection can be perceived through warm care, a feeling of care and attention, concern, empathy in the doctor-patient relationship, generating a positive experience through perceived quality (Johnson and Grayson, 2000), being related to emotional ties. People feel that they can trust when they perceive reciprocity in actions or feelings such as: genuine care, altruistic behavior and concern for their well-being (McAllister, 1995). Competence-based confidence is related to cognitive aspects and can be described as the ability to pursue an intention, a goal or a performance. In the case of health services, it reflects the ability to be skillful or effective (Van Doorn *et al.*, 2017).

Surgical procedures are situations where patients are subject to a high level of stress, and the perceived risk is often high. Decision-making in situations like these is usually a

complex process due to the individual's high level of involvement. Providing patients with clear information about how robots work in surgery can make it easier for healthcare providers to understand that they will be even more competent when operating with this technology (Torrent-Sellens and Jiménez-Zarco, 2021; Mcdermott *et al*., 2020).

The clinician's technical competence, respect for the patient's points of view, shared information, and patient involvement are valued elements of establishing trust in a doctor-patient relationship (Rowe & Calnan, 2006). Trusting a doctor is a fundamental step for the patient's motivation and for following the treatment according to the professional's guidelines (Terres *et al*., 2015). In healthcare settings involving technology such as online patient support and telemedicine, trust is known as a relevant antecedent of technology and treatment adoption (Chen *et al.*, 2013; Kamal *et al*, 2020). Moreover, trust in the doctor providing healthcare treatment has already been tested as an antecedent of a patient´s intention to adopt robotic surgery (Kao *et al*., 2022). Following the theoretical evidence, we present the following hypothesis:

H2: The patient's interpersonal trust in the doctor will positively impact the patient's adoption of robotic surgery.

Trust in the Institution

Sirdeshmukh *et al*., (2002) define patient trust as the individual expectation that the service provider will fulfill its promises. Some attributes that contribute to the development of trust in health institutions are integrity, transparency, quality of services, and high levels of satisfaction (Sekhon *et al*., 2014). The literature also suggests that trust in a given service is influenced by trust in the institution to which the product or service belongs (Sirdeshmukh *et*

al., 2002). That is, based on institutional (e.g. the hospital where the doctor works) or professional (e.g. reputation) evidence, which allows one of the parties to trust the other even without the existence of a prior relationship with the service provider.

Trust seems to be a relevant aspect when it comes to consumer relationship with technology in services (De Kayser and Kunz, 2022). In robotic surgery, even though trust has not been the focus, previous research suggests that there is a positive spillover effect to public opinion, where patients perceive more positively hospitals that use robots (Boys *et al.*, 2016). Trust is important at the institutional level as it can affect patient support and use of services (Rowe and Calnan, 2006). In the case of telemedicine, which is a technology that requires the acceptance of the patient, trust has already been proven as a relevant antecedent of technology adoption (Kamal *et al*., 2020). Based on this rational we infer that trust in the institution would impact patients' propensity to adopt new technologies. Therefore:

H3: Trust in the institution will positively impact the adoption of robotic surgery by the patient.

Healthscape elements

During the provision of health services, there are high levels of uncertainty and tangible aspects cannot be neglected (Terres and Basso, 2018) because, in the absence of concrete experience with the service provider, patients base their confidence on what they immediately perceive. One of these elements is the “servicescape", which refers to tangible aspects of the service environment that can suggest positive attributes, such as service quality and competence (Bitner, 1992; Durna *et al*., 2015).

The tangible aspects of health services are also known as “healthscape”. Literature

already confirmed that in such vulnerable contexts, not only the physical structure of the hospital, but also the provision of experiences that refer to comfort and well-being can be associated with greater patient satisfaction and service quality (Swan *et al.*, 2003; Suess and Moody, 2018). In other words, the service context would be perceived as providing therapeutic and restorative benefits, which besides enhancing one´s well-being, would also positively influence purchase intentions (Rosenbaum *et al*., 2020). The healthscape includes design, environmental and social aspects, which influence patient perceptions. The relationship of these variables with patient trust will be discussed next.

Design Factors

Design factors refer to the spatial distribution layout of machines, equipment and furniture, the size and shape of these items and the spatial relationships between them can facilitate performance and improve achievement of organizational goals (Bitner, 1992). A service that is designed to convey tranquility, warmth, and functionality, will create more positive experiences and positively influence the patient's well-being (Prajitmutita *et al*., 2016).

In healthcare settings, design factors and social factors affect the patient's initial trust in the doctor and this relationship is mediated by their institutional trust (Terres and Basso, 2018). This relationship happens because design cues constitute concrete physical evidence that influence a patient's assessment about the service provider, such as safety perceptions, which also impacts behavioral responses (Kumar *et al*., 2023; Swan *et al*., 2003).

Environmental Factors

Environmental aspects are related to intangible conditions that influence sensory perceptions and impact consumers physically and psychologically. These elements include

auditory stimuli (music and noises), scent, lightning, temperature, and cleanliness (Kumar *et al*., 2023).

Feeling physically uncomfortable due to ambient aspects such as temperature, lightning and odor, it influences how long individuals remain in the said environment and also how they respond to interactions with other people (Baker *et al*., 2020). Likewise, in healthcare situations, environmental factors contribute to the physical and mental well-being of patients. Patients perceive the hospital in its entirety, as a set of attributes, so the term hospitality starts to make sense in modern health environments, being considered an attribute in the patient's choice for a particular institution (Suess and Mody, 2017). In other words, patients derive restorative benefits and present higher perceived well-being, from healthcare contexts such as the hospital facilities. In turn it positively influences intentions to use the provided services and also to pay for it in case of private healthcare institutions (Mody *et al.*, 2020).

Social Factors

Social aspects of the healthscape are related to the people present in the service encounter (e.g. employees, customers and companions), their quantity (i. e. crowding) (Rosenbaum and Massiah, 2011) and the quality of interactions (Jang *et al*., 2015). The facilitation theory suggests that, even when individuals do not interact directly, the mere presence of others and the monitoring of social relationships influence behaviors and experiences (Tombs and McColl-Kennedy, 2010).

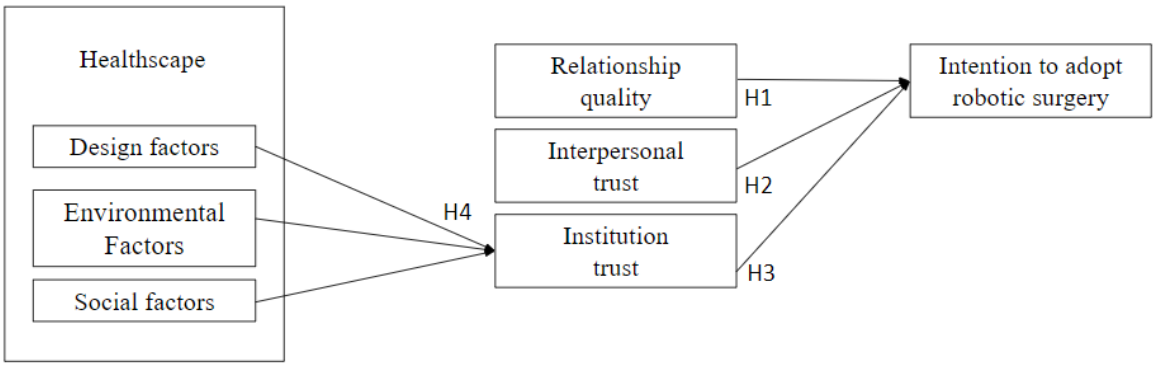
In the healthscape, social elements are particularly important. Positive and empathic interactions with healthcare staff, for instance, may mitigate negative feelings by offering social support to patients who are in a vulnerable position (Suess and Mody, 2018). All these

elements influence not only patient satisfaction and well-being, but also the perceptions of trust, since healthscape elements are tangible cues that are helpful when assessing the probability, a service provider has to live up to one's expectations. For instance, previous research has shown that the dress code adopted by physicians is associated with perceptions of trust and competence (Chung *et al*., 2012). An approach from the healthcare provider associated with hope and potential positive outcomes of treatment fosters patient´s trust (Kemp *et al*., 2017). Furthermore, hospital design, decor and ambience also have a positive impact on patient´s trust (Ai et al., 2022). Therefore, we can infer that the social, design and environmental elements of the healthscape have a positive effect on perceptions of trust in the institution. Therefore, we suggest the following hypothesis:

H4: The healthscape design (a), environmental (b) and social (c) factors will positively impact trust in the institution.

Figure 1 presents a model containing the research hypotheses, which intended to contribute to the investigation of established relationships, confirming or refuting the presented hypotheses that antecedents of trust in the institution (healthscape), antecedents of interpersonal trust, antecedents of quality of the relationship between physician impact the patient's intention to adopt robotic surgery. The empirical testing of hypotheses will be discussed next.

Figure 1 - Representative model containing the research hypotheses



Source: Prepared by the authors (2023)

Method

Procedures

In order to test the hypothesis, we develop a survey. Data collection was in person with patients being treated at a public hospital in Brazil (Santa Casa de Misericordia Hospital). This hospital is the oldest hospital in south Brazil and provides elective, urgent and emergency outpatient services, as well as auxiliary services for diagnosis, treatment, and surgical procedures. Moreover, it performs all types of organ transplants and is a reference in the diagnosis and treatment of highly complex diseases. The questionnaire was applied in person for 2 researchers and 6 student volunteers, previously trained. It should be noted that were respected throughout data collection, in addition to compliance with the institution's rules. The collection took place between April and July 2022 (following all protective measures against COVID-19). Patients who were waiting for appointments at the hospitals participated in the research.

The sample consisted of 419 participants, through a self-completed questionnaire. The criterion for participation in the study was that the subject was over 18 years old and had used health services in the last six months, because the answers of the interviewees were based on the last medical consultation performed. This study was approved by the Research Ethics Committee and, a Free and Informed Consent Form as used.

The measures adopted were the a 3-item scale (alpha= 0.731) of intention to adopt robotic surgery (Young and Oppenheimer, 2009), a 3-item scale (alpha= 0.762) of interpersonal trust and a 3-item scale (alpha= 0.843) to assess institutional trust (both adapted from Dagger *et al*., 2009), and a 3-item scale (alpha= 0.867) to assess relationship quality (De Wulf *et al*., 2001). Furthermore, healthscape dimensions environmental elements (7-items; alpha= 0.862), design (7-item; alpha= 0.806), and social factors (5-item; alpha= 0.777) were also measured (adapted from Dcunha *et al*., 2019). The three dimensions together also had a good internal consistency (alpha= 0.905). The complete questionnaire can be found in Appendix I.

Data Analysis

The questionnaires were completely anonymized and quality control of the sample data was carried out, after analysis of the valid questionnaires, there were 378 (90.21%) subjects who completed all the scales related to this study, that is, they had information on age, sex and at least 29 of the 31 items answered (90%). Missing responses were replaced by the sample average response. All data analysis were performed on SPSS software considering a significance level of 5%.

To characterize the sample, a descriptive analysis was used, with average, standard deviation, median and interquartile range for quantitative variables. In the case of categorical

variables, absolute and relative frequencies were used. The average age of respondents was 50.7 years with a standard deviation of 15.3 years. Most were female (64.9%), with 33.7% having monthly family income above R$ 4,849.00 and 58.7% having 3 or more family members. The most frequent levels of education were complete secondary education with 27.5%, followed by complete higher education with 23.8%. Regarding consultation frequency, 29.7% of respondents reported consultations every 6 months and 60.6% had a private consultation or health plan, while 39.1% had consultations via Unified Public Health System (Sistema Único de Saúde - SUS) or participated in studies/research at the Institution.

Factor analysis was performed using the Kaiser-Meyer-Olkin Measure of Sampling Adequacy test with a result of 0.854 (p=0.000). These results are in accordance with thresholds established in the literature (Hair, Anderson & Tatham, 1987; Kaiser & Rice, 1974). Moreover, Bartlett's sphericity test (Dziuban & Shirkey, 1974) with chi-square distribution 5746.100, degrees of freedom 465, p=0.000, indicated that the correlations between the items are sufficient to perform the analysis. Eight factors were obtained that explain 67.3% of the data variability. The results are described in table 4.

Table 4 - KMO and Bartlett test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0,854
Bartlett's Test of Sphericity	Qui-quadrado aprox.	5746,100
	Df	465
	Sig p-valor	0,000

Source: prepared by the authors (2023)

Findings

The scales with the highest mean were those related to trust: interpersonal and in the hospital, with 6.76 and 6.73, standard deviation of 0.56 and 0.50, respectively. The scale with the lowest average was Intention to adopt robotic surgery with 4.59, standard deviation 1.77. The results are presented below through the hypotheses raised, through Table 5.

Table 5 - Mean and standard deviation of the scales

Scales	Mean	Standard deviation
Intention to adopt robotic surgery	4,59	1,77
Interpersonal trust	6,76	0,56
Institutional trust	6,73	0,50
Relationship quality	6,46	0,92
Healthscape - Environmental	6,20	0,89
Healthscape – Design	5,91	1,03
Healthscape - Socials	6,02	0,94

Source: elaborated by the authors (2023)

The testing of the hypotheses can be found in table 6 - Correlations among scales. Variance analysis was used to test the hypothesis. The first hypothesis related to the quality of the relationship was confirmed. The results show that the quality of the relationship (QR) between the doctor and the patient will positively impact the adoption of robotic surgery by the patient, beta=0,270 IC95%: 0,071; 0,470; F=7.08; df=1; 351; p=0,008; R^2=0.020.

Table 6 - Correlations among scales

		Intention to adopt robotic surgery	Interpersonal trust	Relationship quality	Healthscape - Environmental	Healthscape – Design	Healthscape - Socials	Institutional trust
Intention to adopt robotic surgery	r	1	0,016	**0,141**	0,103	0,063	**0,113**	**0,111**
	p-valor		0,766	**0,008**	0,054	0,237	**0,033**	**0,037**
Interpersonal trust	r		1	**0,418**	**0,237**	**0,227**	**0,209**	**0,306**
	p-valor			**0,000**	**0,000**	**0,000**	**0,000**	**0,000**
Relationship quality	r			1	**0,252**	**0,290**	**0,312**	**0,274**
	p-valor				**0,000**	**0,000**	**0,000**	**0,000**
Healthscape - Environmental	r				1	**0,654**	**0,503**	**0,369**
	p-valor					**0,000**	**0,000**	**0,000**
Healthscape – Design	r					1	**0,597**	**0,356**
	p-valor						**0,000**	**0,000**
Healthscape - Socials	r						1	**0,398**
	p-valor							**0,000**
Institutional trust	r							1
	p-valor							

Source: elaborated by the authors (2023)

We also used regression analysis to verify whether the quality of the doctor-patient relationship has an impact on the adoption of robotic surgery by the patient. It is possible to notice that satisfaction and the quality of the relationship explain 2.0% of the variability in Intention to adopt robotic surgery ($R^2 = 0.020$). Despite the low R^2, the variable has a significant influence on the Intention to adopt robotic surgery ($p = 0.008$), with an estimated increase of, on average, 0.270 units of adoption of robotic surgery for each increase of one

unit in satisfaction and relationship quality (b= 0.270, p= .008, R2 0.02). In addition, the satisfaction and quality of the doctor-patient relationship positively impacts the adoption of robotic surgery by the patient (coefficient 0.141; p= 0.008), along with social factors (coefficient 0.113; p= 0.033).

Statistically, hypothesis 2, which analyzes whether the patient's interpersonal trust in the doctor will positively impact the adoption of robotic surgery by the patient, was not supported r=0.016, p=0.766. It is noted that the patient's interpersonal trust (CI) in the physician was extremely high, which could be explained since data was collected in an environment of re-consultations and as such patients seemed extremely confident in the doctor. Furthermore, there was no difference in results if we consider patients that were using the public versus private health system (t=1.42, df=242, p=0.158).

Healthcare decision-making offers a unique emotional and complex context to test the limits of theories that seek to explain and predict the patient's decision (Agarwal, 2020). Some reflections may justify this result, despite trusting the doctor a lot, the fear and risk perception of adopting robotic surgery is a finding present in other studies, such as the study by Muaddi *et al*. (2022). Through a clinical simulation for abdominal surgery, researchers compared the preference of patients between the surgical technique through laparoscopy and robotic surgery. For the studied population, fear is greater in procedures using robotic surgery than in laparoscopic surgery. In view of this, most participants preferred laparoscopic surgery and they reported more evidence accumulating as to its benefit. In addition, the participants perceived the surgeon in full control of the instruments and, therefore, would be readily available in case of malfunction.

While for participants whose preference was robotic surgery, there was a perception that the technology is more recent, being a state-of-the-art, more sophisticated technique,

providing better technical control and precision during surgery, however, with a greater chance of errors. As a complementary finding, the study points out that robotic surgery was more associated with seeing surgeons as more competent and reliable than laparoscopic surgery. Even though people fear such technology in procedures for them, they still associate surgeons using these approaches as experts. Such results point to a possible psychological explanation. Although robotic surgeries may not improve surgical outcomes, beyond what laparoscopic surgery can provide, it can add a 'glow' of expertise to the surgeons who conduct them, a competitive edge and positive image of the professional.

Hypothesis 3 verified whether trust in the institution positively impacts the adoption of robotic surgery by the patient, which was corroborated. We can observe the correlations of the variables, so we see that the CH (trust in the institution) variable impacts on the adoption of robotic surgery by the patient (PR) $r=0.111$, $p=0.037$.

Table 7 describes some characteristics of the relationship with the physician. It can be noted that the median consultation time with the same professional is 2 years with an interval varying between 1 and 4 years, that is, most patients have a reasonable relationship time with the doctor, this finding may be related to the quality of the doctor-patient relationship, hypothesis corroborated above. Time is a fundamental element for trust and favoring the bond between doctor and patient (Lewicki and Bunker, 1995).

Table 7 - Characteristics of the relationship with the doctor

Characteristics	n(%)
Time seeing the same doctor (years)[1]	**2.0 (1.0;4.0)**
Appointment frequency	
More than once a month	45 (12.7)
Monthly	73 (20.7)
Every 6 months	105 (29.7)
Once a year	58 (16.4)
Other option	69 (19.5)
Did not want to answer	03 (0.8)
Type of Appointment	
Private + Health Insurance	214 (60.6)
Public health system	138 (39.1)
Did not want to answer	01 (0.3)

[1] median (interquartile range)

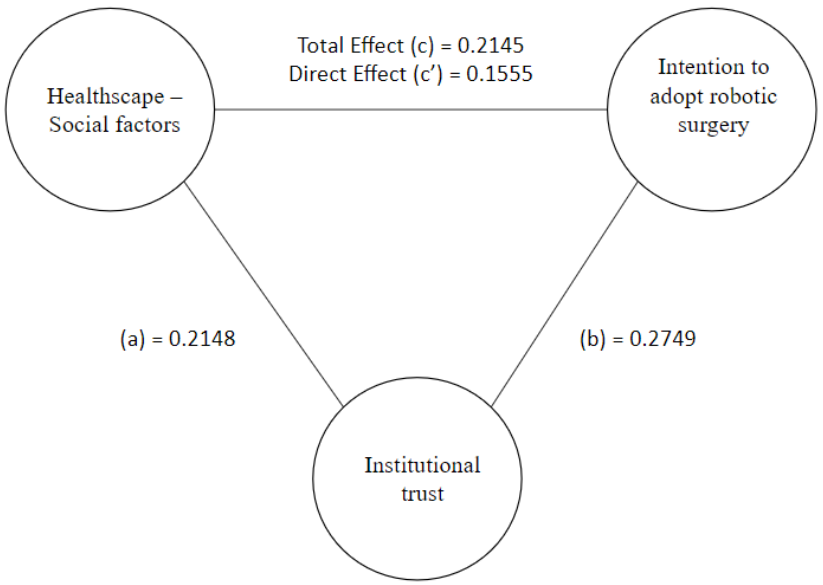
Source: elaborated by the authors (2023)

Finally, hypothesis 4: design (a), environmental (b) and social (c) factors of the healthscape positively impact trust in the institution, was also corroborated. In this way, we have that the environmental (Healthscape - environmental) r=0.369, p=0.000, design (Healthscape - Design) r=0.356, p=0.000 and social (Healthscape - social) r=0.398, p=0.000 factors of the healthscape partially impact trust in the institution (CH). When we analyze whether these factors are mediators in the relationship between trust in the institution and technology adoption, we only have social factors with statistical significance. The deepening of these analyzes will be presented later, in the analysis of mediation.

Mediation

When analyzing mediation in hypothesis 4, through the SPSS PROCESS macro, template 4, design (a), environmental (b) and social (c) factors of the healthscape (HS) will positively impact trust in the institution, we have the following result: only social factors had a significant effect and could be analyzed as mediating factors. Environmental and Design factors bordered the variable trust in the institution, so they could not be analyzed by mediation because X did not impact Y. Mediation analysis is a statistical method used to answer questions about how an independent variable X affects a variable dependent Y, (Prado *et al*., 2014). Thus, there was no effect between them, so it was not possible to verify the mediation. Figure 2 ilustrates the mediating factors.

Figure 2 - Mediation effects



Source: prepared by the authors (2023)

The impact Healthscape - social factors on the mediator trust in the institution had (a-effect) was significant, b=0.2148; 95%CI: [0.1629; 0.2668]; t=8.13; p<0.001. It is also noted the effect of Healthscape - social factors impacting on the variable Intention to adopt robotic surgery (total-c effect), which was significant, b=0.2145 CI95: [0.0171; 0.4119]; t=2.14; p=0.0333, where the social factors variable explained 1.28% of the Intention to adopt robotic surgery variability (R^2=0.0128). The effect of Healthscape - social factors impacting Intention to adopt robotic surgery mediated by Institutional trust (direct effect - c') was not significant, b=0, 1555 IC95: [-0.0595; 0.3704]; t=1.42; p=0.1558. This model explained 1.8% of the Intention to adopt robotic surgery variability (R^2= 0.0180). The mediation effect (indirect effect - ab) was not significant, b=0.0591; IC Bca95%: [-0.0252; 0.1482].

Complementary analyzes

As a complementary analysis to measure whether the results could vary according to the severity of the case, we used the control variable - Consequence of exchanges (TC). It was applied *Student's t test*. The analysis shown in Table 8 describes the variable type of consultation, which was categorized into public health system vs private health system for better visualization. It can be noted that there was a significant mean difference in two scales P= (0.001), in the (TC) - control variable - which had a higher mean in public health system, with 5.61 against 4.65 and in Healthscape - Environmental Factors P = (0.003), which had the lowest mean in the public health system, 6.03 against 6.31. It is then noted that patients using the public health system had a more severe health condition, with greater perceived consequences in relation to the risk of death and that environmental factors are more relevant for this public. One explanation for this difference may be associated with consumer identities. Individuals using public health systems are more prone to be part of a social group with financial restrictions or lower budgets available for healthcare treatment. Being part of a

social underprivileged group influences the behavior in consumer spaces, because patients may look for cues that signal inclusion (or exclusion) towards them (Chaney *et al*., 2019). Hence, the environment dimension of the healthscape is a relevant cue for consumers who are part of minorities or that perceive themselves as having a stigmatized identity in service settings.

Table 8 - Comparison of scales according to type of consultation

Scale	**Type of Appointment**		**p-value**
	private system (n=214)	**public health system (n=138)**	
	media (DP)	media (DP)	
Intention to adopt robotic surgery	4,52 (1,74)	4,69 (1,82)	0,362
Interpersonal trust	6,80 (0,50)	6,70 (0,64)	0,158
Institutional trust	6,74 (0,50)	6,73 (0,51)	0,841
Relationship quality	6,46 (0,94)	6,47 (0,89)	0,959
Healthscape – Environmental factors	6,31 (0,80)	6,03 (1,00)	**0,003**
Healthscape – Design factors	5,92 (0,99)	5,90 (1,09)	0,818
Healthscape – Social factors	6,10 (0,83)	5,90 (1,08)	0,060
Consequences of changes	4,65 (1,92)	5,61 (1,57)	**<0,001**

Source: elaborated by the authors (2023)

Results of the hypothesis test are shown in table 9. Two hypotheses were supported, 1 was partially supported and two were statistically unsupported.

Table 9 - Result of the hypothesis test

Hypothesis	Result
H1: The quality of the doctor-patient relationship will positively impact patient adoption of robotic surgery.	Corroborated
H2: The patient's interpersonal trust in the physician will positively impact patient adoption of robotic surgery.	Not Corroborated
H3: Trust in the institution will positively impact patient adoption of robotic surgery	Corroborated
H4: The design (a), environment (b) and social (c) factors of the healthscape will positively impact trust in the institution.	Partially corroborated

Source: elaborated by the authors (2023)

Discussion and Conclusion

Theoretical Contribution and Practical Implications

The main strength of this study lies in studying these variables together, the main contribution being to corroborate the hypotheses about the importance of institutional trust (Dagger, Danaher and Gibbs, 2009) and the quality of the doctor-patient relationship (Dagger *et al*., 2009; Palmatier *et al*., 2006; De Wulf *et al*., 2001) as determinants for greater adoption of robotic surgery. Empirically, we demonstrate that flexible variables together relate to greater adoption of robotic surgery.

Complementarily, the design, environmental and social factors of the health environment positively impact trust in the institution, with social factors being the elements that most strongly mediate the adoption of robotic surgery. Regarding the social factors of the healthscape, some studies such as Thell's (2011) strongly recommend the participation of the

team, mainly nursing, as allies in assisting with robotic procedures, explaining in detail to the patient what is being done and humanizing the care relationship.

This study also illustrates the necessary inseparability between services, ambience, and trust. In the practical field, it is intended to help managers and service providers in making the best decision on issues related to the implementation of these new technologies with the aim of transmitting safety, maximizing quality and improving the experience of patients (Torrent-Sellens and Jiménez-Zarco, 2021).

As an unexpected finding, it is noted that the patient's interpersonal trust in the doctor had no impact on the patient's adoption of robotic surgery, as hypothesized. It is known that these systems are still recent in the Brazilian market and are still unknown by many patients, therefore, the non-acceptance of this type of procedure can be influenced by mistrust and misunderstandings in the understanding of the technology itself. According to previous research (Ahmad, 2016), participants exhibited negative attitudes and perceptions toward the concept of robotic-assisted surgery. Such perceptions were associated with the fact that the robot was perceived as an artificial intelligence with automated functions to perform invasive procedures, without the aid of a surgeon. This corroborates the work of Irani *et al*., (2016), where more than 65% of the participants were unaware that the surgeon directly controls the maneuver of one or more robotic arms through a computer-controlled system. Corroborating the cited studies, it was observed that most participants in this research were unaware of the robot-assisted technique, or even had erroneous perceptions, leading to the refusal of this technology (Longoni, Bonezzi and Morewedge, 2019).

Previous research on the presence of service robots in a healthcare setting has suggested that performance expectancy, effort expectancy, social influence, facilitating

conditions, and trust are positively associated with patients' behavioral intention to use healthcare robots (Alaiad and Zhou, 2014). In robotic surgeries, the technology does not work autonomously, therefore, the role of the health professional (for example, the doctor) must also be taken into account. The patient needs to understand exactly how a robotic surgery occurs so that, in addition to trusting the professional, he can trust the performance and the relationship between the surgeon and the machine (Boys *et al*., 2016). These patients need to receive more detailed information to reduce uncertainties and understand the value of an innovation like this - performance (Caic *et al.*, 2019; Torrent-Sellens and Jiménez-Zarco, 2021; McDermott *et al.*, 2020). Misunderstandings were found in relation to robotic procedures, these were internalized by stereotyped and conventional media representations. Participants also expressed deep concerns about acceptance of new technologies, decoupling the procedure from human contact between surgeon and patient. This was reported to reduce face-to-face interaction as the robot was unable to meet the patient's specific needs, thus reducing patients' confidence. This concept corroborates the findings of Longoni, Bonezzi and Morewedge (2019) related to neglect of uniqueness, the patient's belief that the robot will not be able to recognize anatomical differences and other particularities of each person.

To reduce misunderstandings and uncertainties, it is recommended to invest heavily in information and awareness (Stacey *et al*., 2017), explaining the technique used to the patient and working with shared decision-making between doctor and patient, the latter need to be technically aware of the evidence-based information about available options, likely benefits and harms of each option, as well as clarifying doubts or erroneous beliefs. In this way, patients can make treatment decisions congruent with their values and goals (Stacey *et al*., 2017; Boys *et al*., 2016).

Disclosure of the results of a given technology should be done, both to patients and to

the market, as this can help providers who have incorporated accuracy into their practice to differentiate themselves through their performance and receive better returns for their services (Agarwal, 2020). This disclosure can be on websites or through the media. This disclosure reinforces the image that the institution obtains in the community, since the adoption of innovative techniques may reflect that it is a "cutting-edge" institution (Boys *et al*., 2016; Muaddi *et al*., 2022). These findings corroborate previous findings (Caic *et al*., 2019), in which users evaluate social robots value co-creation and co-destruction potential according to perceived warmth and competence of the robot, can be demonstrated with outcome indicators. And this is directly associated with their perception of greater benefits to use compared to damage or loss.

Limitations and Future Research Directions

Future studies could measure perceptions of fear and check its impact on intentions to adopt the technology in healthcare situations Kao *et al*., (2022). Furthermore, other explanatory mechanisms can be investigated to explain the relationship between trust and adoption of technologies. Previous research suggested that reciprocity may be a relevant element in the relationship between doctors and patients Trust influences each other's behavior and is interdependent because doctors and patients follow a past history and, eventually, a common future, through reunions in services (Petrocchi *et al*., 2019). Moreover, a study demonstrated that elements such as gratitude, described as a fundamental social component of happiness, provide an emotional basis for reciprocal behavior (Palmatier *et al*., 2009), this seems to play a key role in creating connections with customers and increasing engagement (Bock *et. al.*, 2016; Palmatier *et al.*, 2009).

Likewise, one potential limitation of this research is the data collection setting. When

they are in a hospital environment, patients can already show greater fragility, fear, and distrust in relation to surgical techniques, being a very sensitive topic that better elaboration and understanding of the procedure before opting for it (Muaddi *et al.*, 2022). Therefore, future research could include data from less vulnerable settings, or consider only patients with prescribed surgical treatment. An exploratory qualitative study is also suggested, since it could offer a better understanding what are the fears, expectations and, eventually, patients´ misconceptions regarding the understanding of what consists of a surgery with the aid of robots (Theunissen *et al*.; 2014; Caic *et al.*, 2019).

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5 RESULTADOS DA DISSERTAÇÃO

Durante a pesquisa, foi possível verificar que os resultados advindos da revisão integrativa de literatura auxiliaram na compreensão geral sobre os determinantes da adoção de tecnologias, especificamente a cirurgia robótica, além de constatar o que a comunidade acadêmica internacional estuda sobre o tema. Os estudos foram publicados na Europa, EUA e Ásia, não sendo encontrados, na revisão, artigos da América Latina ou Brasil. Este achado reforça o argumento inicial de que há poucas publicações nesta área no país ou mesmo no continente latino-americano.

Fatores como a transparência, a confiança e a autonomia do paciente parecem influenciar na relação médico-paciente, interferindo assim na adoção de cirurgia robótica (YAKAR *et al.,* 2022; KAO *et al.,*2022; SCHERR *et al.*, 2017) . Vários artigos compararam a cirurgia robótica com a tradicional, observando vantagens como menor perda de sangue durante o procedimento, menor tempo intra operatório, menor tempo de internação e melhor qualidade de vida para os pacientes (CATOO *et al.*, 2022; NAKAMURA *et al.*, 2018 e PRABHU *et al*., 2020).

Em relação à pesquisa de campo, em linhas gerais as hipóteses foram corroboradas, sendo a confiança na instituição, os fatores do *healthscape*, mais fortemente fatores sociais, e, a qualidade do relacionamento entre médico e paciente antecedentes da intenção de adoção de cirurgia robótica.

Em relação à confiança no médico, de forma isolada, esta variável parece não ter impacto direto ou não ser ‘suficiente’ para a intenção de adoção. Conforme estudo (ALAIAD e ZHOU *et al*., 2013) sobre a presença de robôs de serviços em ambiente de saúde, temos que a expectativa de desempenho, a expectativa de esforço, a influência social, as condições facilitadoras e a confiança estão positivamente associadas à intenção comportamental dos pacientes em utilizar robôs de saúde. Ressalta-se que estes resultados foram obtidos testando o uso do robô pelo paciente, nas cirurgias robóticas, a expectativa de desempenho do equipamento passa por um profissional, desta forma a análise destes determinantes passa pela relação robô-cirurgião. O paciente precisa compreender exatamente

como ocorre uma cirurgia robótica para, assim, além de confiar no profissional, confiar na performance e na relação entre o cirurgião e a máquina (BOYS *et al.*, 2016). A facilidade de uso afeta a expectativa de desempenho, pacientes que compreendem corretamente as informações sobre o procedimento com uso de robô sentirão confiança em optar por esta tecnologia (KAO *et al.,* 2022).

Mesmo confiando muito no médico, o paciente tem receios em aceitar a técnica, conforme respostas à questão 14 do questionário (Young, Oppenheimer, 2009) - Apêndice II. Supõe-se que poucos pacientes conheciam realmente a técnica cirúrgica com uso de robô na amostra pesquisada. Estudos como o de Boys *et al.,* (2015) e Muaddi *et al.,* (2022) refletem, profundamente, sobre a percepção pública em relação à cirurgia robótica. Relatam que parece haver certos equívocos em relação ao conhecimento da população sobre o uso de robôs em cirurgia, inclusive que o robô poderia ter algum grau de autonomia, provocando malefícios, ou poderia falhar no ato cirúrgico, causando danos internos. Essas percepções e preocupações errôneas podem, também, justificar, de alguma forma, alguns resultados obtidos nesta pesquisa. As instituições e os médicos precisam garantir que seus pacientes se sintam confortáveis e entendam essa tecnologia, visando sanar essas dúvidas e desmistificar conceitos equivocados (MUADDI et al., 2022).

6 CONCLUSÃO/CONSIDERAÇÕES FINAIS

Conclui-se, ao final da análise dos artigos 1 e 2 que o tema: antecedentes da adoção de cirurgia robótica é um relevante e atual, sendo necessárias mais pesquisas, principalmente no Brasil, para a continuidade dos resultados encontrados. No artigo 1 evidenciou-se que o país de maior interesse na temática foi a Inglaterra. Fatores como transparência, confiança e autonomia do paciente parecem influenciar na relação médico-paciente, interferindo assim na adoção de cirurgia robótica, quando assim indicada. Vários artigos compararam a cirurgia robótica com a tradicional, observando-se vantagens como menor hemorragia durante o procedimento, menor tempo intra operatório, menor tempo de internação e

melhor qualidade de vida para os pacientes. Comparativamente, as vantagens parecem prevalecer em relação às desvantagens. Como desfechos do artigo 2 verificou-se que a confiança na instituição impacta positivamente a adoção de tecnologia robótica pelo paciente. Fatores de *design*, ambientais e sociais do *healthscape* impactam positivamente a confiança na instituição, sendo os fatores sociais elementos que, mais fortemente, medeiam a adoção de tecnologia robótica. A qualidade do relacionamento entre médico-paciente também parece estar relacionada com maior adoção de cirurgia robótica. Estatisticamente, não foi possível relacionar a confiança interpessoal do paciente no médico com impacto na adoção de tecnologia robótica pelo paciente. As características do paciente, como a idade, também não tiveram associação com maior ou menor resistência para adoção de tecnologia robótica. Como limitações do estudo, verificou-se que as escalas poderiam ser revisadas visando uma ampliação no número de perguntas ou ainda a utilização de escalas específicas para cirurgia robótica.

6.1 CONTRIBUIÇÕES ACADÊMICAS E PRÁTICAS

Com o estudo, pretende-se contribuir com os aspectos teóricos da área auxiliando na compreensão dos antecedentes para intenção de adoção de determinada tecnologia na área da saúde. No campo prático, pretende-se auxiliar gestores e prestadores de serviços na melhor tomada de decisão em relação às questões atinentes à implantação dessa nova tecnologia. Benmessaoud *et al*., (2011) recomendaram que as instituições ofereçam programas de treinamento em parceria com as empresas de tecnologia médica, podendo desenvolver planos estratégicos e incentivos para testar o emprego da cirurgia assistida por robótica em sua prática de rotina. Além de reconhecerem nas escolas médicas um campo apropriado também para pesquisas na área. A equipe de apoio também precisa estar treinada e confiante para um desfecho favorável (THELL*,* 2011). Várias barreiras são reconhecidas pelos pacientes e mesmo pelas fontes pagadoras para expansão desta modalidade cirúrgica, como exemplo temos a curva de aprendizado íngreme, a falta de incentivos ou encorajamento dos hospitais, além do alto custo do robô. Para que os cirurgiões avaliem as vantagens e se sintam seguros em oferecer

ao paciente, essas questões devem ser abordadas por gestores e prestadores de serviço.

Sabe-se que a escolha do tratamento para o paciente deve ser feita de forma compartilhada com o paciente, uma vez que traz maior empoderamento, engajamento e autonomia para este (STACEY *et al.,* 2017). Para que possa fazer esta escolha compartilhada, o paciente precisa estar, tecnicamente, instruído sobre todas as informações, baseadas em evidências, sobre as opções disponíveis, prováveis benefícios e malefícios de cada um dos tratamentos, além de esclarecer dúvidas ou crenças equivocadas, permitindo, dessa forma, que os pacientes tomem decisões de tratamento congruentes com seus valores e objetivos (STACEY *et al.,* 2017; BOYS *et al*., 2015). Estas informações devem ser precisas e imparciais e, também, devem estar livres de linguagem persuasiva que possa influenciar a decisão do paciente (DIXON *et al.,* 2014).

6.2 OPORTUNIDADES PARA PESQUISAS FUTURAS

Como continuidade desta pesquisa, sugere-se um estudo com escala específica para adoção de cirurgia robótica (THEUNISSEN *et al*., 2014), eventualmente envolvendo também profissionais de saúde e familiares para uma avaliação abrangente do tema. Além disso, sugere-se um estudo sobre um tipo específico de cirurgia, por exemplo nas áreas de ginecologia e/ou urologia. Desta forma os resultados poderiam ser mais fidedignos e personalizados.

Sugere-se também aplicar a pesquisa em um ambiente não hospitalar. Talvez ao estarem em uma instituição de saúde os pacientes já possam apresentar maior fragilidade, medo e desconfiança em relação à técnicas cirúrgicas (MUADDI, et al., 2022), sendo um tema bastante sensível, exigindo elaboração e compreensão melhor do procedimento antes de optar por ele.

7 CONSIDERAÇÕES ÉTICAS

O referido projeto se enquadra nos termos da Resolução 466/12 do CONEP e da Lei no 11.794 de 8 de outubro de 2008, que regulam CEP e CONEP.

Os dados a serem explorados no estudo estão totalmente anonimizados, impossibilitando a identificação do respondente. O presente estudo obteve sua aprovação junto ao Comitê de Ética em Pesquisa - CEP - da ISCMPA (Irmandade da Santa Casa de Misericórdia de Porto Alegre) na data de 20 de dezembro de 2021, sob parecer de n. 5.178.683. Os pareceres de aprovação do projeto e da inclusão da UFCSPA como instituição coparticipante podem ser verificados nos Anexos A e B, respectivamente.

Além das considerações mencionadas acima, a pesquisadora observou atentamente as normativas institucionais, como a Lei Geral de Proteção de Dados (LGPD).

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APÊNDICE A - TERMO LIVRE E ESCLARECIDO

Você está sendo convidado (a) a participar da pesquisa intitulada “O desenvolvimento da confiança nas diferentes fases do relacionamento em serviços de saúde” que tem como objetivo investigar a confiança do paciente no médico em diferentes fases do seu relacionamento (por exemplo, em relacionamentos mais recentes comparando-se com relacionamentos mais longos). A pesquisa será realizada através da resposta de questionários por pacientes que interagem com estes profissionais da saúde e que sejam maiores de 18 anos. Os benefícios da pesquisa consistem em um melhor entendimento da confiança do paciente no médico e da importância do relacionamento entre pacientes e médicos para o êxito do tratamento. O preenchimento do questionário dura cerca de dez (10) minutos.

A participação nesta pesquisa apresenta riscos mínimos tais como eventuais desconfortos em você lembrar de experiências em consultas médicas anteriores que podem não ter sido positivas. A pesquisadora estará à disposição para lhe auxiliar em qualquer necessidade em relação a isso. A pesquisadora garante indenização aos participantes por danos comprovadamente decorrentes da pesquisa. Ressalto, também, que é garantido ao participante a sua plena liberdade de recusar-se a participar ou retirar seu consentimento, em qualquer fase da pesquisa, sem penalização alguma e que há garantia de manutenção do sigilo e da privacidade dos participantes da pesquisa durante todas as fases desta pesquisa.

No caso de você concordar em participar dessa pesquisa, favor assinalar que “concorda”. Se não concordar, sua recusa não trará nenhum prejuízo pessoal. Caso deseje, você poderá imprimir esse termo de consentimento livre e esclarecido. A pesquisadora Mellina da Silva Terres coloca-se à disposição para maiores esclarecimentos pelo telefone (51) 98179-0657 ou pelo endereço Rua Sarmento Leite, 245, sala 400C, Porto Alegre, RS. O Comitê de Ética em Pesquisa da Universidade Federal de Ciências da Saúde de Porto Alegre (UFCSPA) também se coloca à disposição para maiores esclarecimentos pelo telefone (51) 3303.88.34 ou pelo endereço Rua Sarmento Leite, 245, sala 407, prédio 03. O Comitê de Ética em Pesquisa da ISCMPA também se coloca à disposição para maiores esclarecimentos pelo telefone: 3214.8571, endereço: Av. Independência, 155 – 6º andar – HDVS-Porto Alegre -RS. E-mail: cep@santacasa.tche.br.

Desde já agradeço a atenção e disponibilidade.

Atenciosamente,

Mellina da Silva Terres

APÊNDICE B - AVALIAÇÃO DA PRESTAÇÃO DE SERVIÇOS DE SAÚDE

Avalie o seu relacionamento com o(a) médico(a) que você realizou a sua consulta mais recente na Santa Casa. Não existe certo ou errado, portanto, sinta-se à vontade para responder as questões conforme suas percepções. Sua opinião é muito importante para o nosso estudo. A menos que esteja especificado outro tipo de resposta, marque apenas uma alternativa como sua resposta à questão feita. Nas questões onde se pergunta o quanto você concorda, a resposta varia de 1 (discordo totalmente) a 7 (concordo totalmente).

Quando foi sua última consulta médica com esse médico/essa médica? Por favor, indique o mês e o ano aproximadamente? _____(mês)_____(ano)

Desde quando você tem consultado com esse médico/essa médica? Por favor, indique o ano aproximadamente. _____(ano)

Com que frequência você consulta com ele/ela aproximadamente?

( ) mais de uma vez no mês ( ) mensalmente ( ) a cada 6 meses ( ) anualmente

( ) Outra. Por favor especifique: _____

Qual a especialidade deste(a) médico(a)? _____

Como você pagou a consulta?

( ) Sistema Único de Saúde ( ) Plano de Saúde ( ) Particular ( ) Outro. Por favor especifique: _____

Intenção de Lealdade (Adaptado de Zeithaml *et al*., 1996)							
1. Eu diria coisas positivas sobre este médico para outras pessoas.	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***
2. Eu recomendaria este médico a qualquer pessoa que procurasse meu conselho.	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***
3. Eu encorajaria meus amigos e parentes a irem ao consultório do médico se eles tiverem problemas semelhantes.	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***
4. Eu consideraria este médico como minha primeira escolha para tratar este tipo de problema.	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***
5. Se necessário, eu consultaria mais com este médico no futuro.	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***

6. Eu voltaria a esse médico se tivesse problemas de saúde semelhantes aos que me levaram a procurá-lo.	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***

Intenção de busca de segunda opinião (Adaptado de Balkrishnan *et al*. 2003)							
7. Eu gostaria de receber uma segunda opinião de outro médico.	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***
8. Eu gostaria de ouvir a opinião de outro especialista.	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***
9. Eu planejaria consultar com outro médico para investigar meu problema.	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***

Atitude para uso da Tecnologia (Adaptado de Venkatesh *et al.,* 2003)							
10. Penso que usar telemedicina com esse(a) médico(a) da minha última consulta seja uma boa solução para mim.	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***
11. Penso que o uso da telemedicina com esse (a) médico(a) da minha última consulta pode ser interessante para mim.	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***
12. Gosto da ideia de utilizar a telemedicina com esse(a) médico(a) da minha última consulta.	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***

Intenções de percepção de risco pessoal e adesão ao tratamento (Young, Oppenheimer, 2009)

13. Uma outra tecnologia que vem sendo utilizada é o auxílio de robôs para a realização de cirurgias. **Qual a probabilidade de você aceitar que o(a) médico(a) que você pensou no início da pesquisa tenha o auxílio de um robô para realizar um procedimento:**

Pouco provável (1)	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Muito provável***

14. Avalie o quanto você teria medo de complicações com um procedimento feito com o auxílio de um robô recomendado pelo seu/sua médico(a) da consulta mais recente:

Nada de medo (1)	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Muito medo***

15. Avalie o risco na sua opinião de um procedimento recomendado pelo(a) seu(sua) médico(a) da última consulta feito com o auxílio de um robô:

Nada arriscado (1)	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Muito arriscado***

Qualidade dos serviços no passado (Adaptado de Hess *et al.,* 1996)							
16. O atendimento desse(a) médico(a) tem sido excepcional.	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***
17. A qualidade do atendimento desse(a) médico(a) tem deixado a desejar.	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***
18. Os atendimentos desse médico(a) no passado foram excelentes.	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***

Confiança Interpessoal (Adaptado de Dagger, Danaher, e Gibbs, 2009)							
19. Esse(a) médico(a) é confiável.	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***
20. Esse(a) médico(a) faz o que é correto.	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***
21. Esse(a) médico(a) possui muita integridade.	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***
Tipo de consequência (Adaptado de Moss-Morris *et al*., 2002)							

22. Meu problema de saúde é (ou era) sério.	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***
23. Minha doença tem (ou teve) sérias consequências para minha vida.	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***
24. Meu problema de saúde causa (ou causou) dificuldades para as pessoas que estão perto de mim.	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***
Calor (Adaptada de Kirmani *et al.;* 2017, Wolf *et al*.; 1978; Thom *et al*.; 2001)							
25. Esse(a) médico(a) é amigável.	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***
26. Esse(a) médico(a) me recebe calorosamente.	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***
27. Esse(a) médico(a) me ouve atentamente.	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***
28. Esse(a) médico(a) me olha nos olhos quando estou falando, em vez de ficar olhando para o computador ou para algum outro lugar.	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***
29. Esse(a) médico(a) aproveita para conversar e discutir minhas preocupações; nunca me apressando.	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***
30. Esse(a) médico(a) tenta descobrir todas as razões da minha visita, quais são minhas preocupações e minhas esperanças.	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***
31. Esse(a) médico(a) me conforta e me tranquiliza, me fazendo sentir melhor.	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***
Competência (Adaptada de Kirmani *et al*., 2017; Wolf *et al*., 1978; Thom *et al*., 2001)							
32. Esse(a) médico(a) me encoraja a fazer perguntas e responde claramente.	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***
33. Esse(a) médico(a) explica o que preciso saber sobre meus problemas de saúde, como e por que ocorreram e o que pode acontecer no futuro.	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***

34. Esse(a) médico(a) demonstra competência em diagnosticar e tratar meus problemas.	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***
35. Esse(a) médico(a) é um dos melhores em sua área.	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***
36. Esse(a) médico(a) possui boa experiência em sua área de atuação.	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***
37. Esse(a) médico(a) demonstra segurança na informação que ele dá aos seus pacientes.	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***
38. Esse(a) médico(a) tem uma história de sucesso.	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***
39. Esse(a) médico(a) demonstra conhecimento atualizado em sua área de especialização.	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***

Satisfação e qualidade do relacionamento (De Wulf *et al*., 2001)							
40. Eu possuo um relacionamento de alta qualidade com esse(a) médico(a).	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***
41. Fico feliz com os esforços que esse(a) médico(a) faz em relação a pacientes como eu.	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***
42. Estou satisfeita(o) com o relacionamento que eu tenho com esse(a) médico(a).	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***

Healthscape (Dcunha, Suresh, Kumar, 2019)							
Fatores ambientais							
43. A temperatura é confortável	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***
44. Há boa ventilação	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***

45. A iluminação é adequada	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***
46. O odor(cheiro) é adequado	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***
47. O nível de ruído é aceitável	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***
48. As instalações físicas são limpas	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***
49. Os locais são limpos	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***
Fatores de design							
50. A arquitetura é visualmente atraente	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***
51. As cores das paredes e fachadas são adequadas	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***
52. Os prontuários e/ou documentos do hospital são padronizados com boa aparência.	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***
53. É fácil se localizar quando circulando no hospital	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***
54. A sinalização do hospital dá claras direções de onde as coisas estão localizadas	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***
55. Nas salas de espera, a disposição dos assentos é adequada e eles são confortáveis	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***
56. O chão do hospital não é escorregadio	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***
Fatores sociais							
57. Existem funcionários suficientes no hospital para atendimento aos pacientes	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***
58. Os funcionários são arrumados e bem vestidos	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***

59. Os funcionários são prestativos e amigáveis	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***
60. Os clientes do hospital são bem vestidos	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***
61. Os clientes do hospital são amigáveis e prestativos	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***

Confiança no Hospital (Adaptado de Dagger, Danaher, e Gibbs, 2009)							
62. Esse hospital é confiável.	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***
63. Esse hospital faz o que é correto.	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***
64. Esse hospital possui muita integridade.	***Discordo Totalmente (1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7) Concordo Totalmente***

Gênero que mais se identifica: ( ) Feminino ( ) Masculino ( ) Outro. Por favor especifique: _____

Idade: _____ anos. Qual é a sua renda familiar mensal aproximada? _____

Nível de Escolaridade: ( ) ensino fundamental incompleto ( ) ensino fundamental completo ( ) ensino médio incompleto ( ) ensino médio completo ( ) ensino superior incompleto ( ) ensino superior completo ( ) pós-graduação incompleta ( ) pós-graduação completa

Número de integrantes da família? _____ Você tem mais alguma observação sobre o seu relacionamento com o(a) médico(a) e/ou sobre o hospital da sua última consulta?

Muito obrigado(a)!

APÊNDICE C - PROTOCOLO DE REVISÃO

PROTOCOL FOR REVIEW

OBJETIVES
Carry out a Review of the literature that allows identifying the research that is being carried out on the theme Robotic Surgery.

QUESTIONS OF RESEARCH	
Question 1	What are the antecedents of the use of robotic surgery by patients and what can they reveal about the acceptance and future of this modality?
	P: patients undergoing surgery using a robot.
	I = post-procedure evaluation that verifies the antecedents of the adoption, such as doctor-patient relationship, trust, etc.
	C = comparison with traditional technique and use of robots.
	O = acceptance/satisfaction and future of robotic surgery.

–
((((((((((((((((((((((((Robotic surgery) OR (computer-aided surgery)) OR (computer-aided surgery)) OR (da Vinci Surgical Systems)) OR (Smart Tissue Autonomous Robot)) OR (Surgery, Computer-Assisted)) OR (Computer Aided Surgery)) OR (Computer Assisted Surgery)) OR (Computer-Assisted Surgeries)) OR (Computer-Assisted Surgery)) OR (Robot-Enhanced Surgeries)) OR (Robot-Enhanced Surgery)) OR (Robotic Assisted Surgery)) OR (Robotic Surgical Procedure)) OR (Robotic-Assisted Surgeries)) OR (Robotic-Assisted Surgery)) OR (Surgery, Robot)) OR (Surgery, Robot-Assisted)) OR (Surgical Procedure, Robotic)) OR (Surgical Procedures, Robotic)) AND (doctor-patient relation)) OR (medical relation)) AND (trust)) AND (acceptance)) OR (satisfaction)
TITLE-ABS-KEY (Robotic surgery OR "computer-aided surgery" OR "computer-aided surgery" OR "Robotic Surgical System" OR "Smart Tissue Autonomous Robot" OR "Surgery, Computer-Assisted" OR "Computer Aided Surgery" OR "Computer Assisted Surgery" OR "Computer-Assisted Surgeries" OR "Computer-Assisted Surgery" OR "Robot-Enhanced Surgeries" OR "Robot-Enhanced Surgery" OR "Robotic Assisted Surgery" OR "Robotic Surgical Procedure" OR "Robotic-Assisted Surgeries" OR "Robotic-Assisted Surgery" OR "Surgery, Robot" OR "Robot-Assisted" OR "Surgical Procedure, Robotic" OR Surgical Procedures, Robotic) AND TITLE-ABS-KEY ("doctor-patient relation" OR "medical relation" OR "trust" OR "acceptance" OR satisfaction)
((((((((((((((((((((((((ALL=(Robotic surgery)) OR ALL=(computer-aided surgery)) OR ALL=(computer-aided surgery)) OR ALL=(Robotic Surgical System)) OR ALL=(Smart Tissue Autonomous Robot)) OR ALL=(Surgery, Computer-Assisted)) OR ALL=(Computer Aided Surgery)) OR ALL=(Computer Assisted Surgery)) OR ALL=(Computer-Assisted Surgeries)) OR ALL=(Computer-Assisted Surgery)) OR ALL=(Robot-Enhanced Surgeries)) OR ALL=(Robot-Enhanced Surgery)) OR ALL=(Robotic Assisted Surgery)) OR ALL=(Robotic Surgical Procedure)) OR ALL=(Robotic-Assisted Surgeries)) OR ALL=(Robotic-Assisted Surgery)) OR ALL=(Surgery, Robot)) OR ALL=(Robot-Assisted)) OR ALL=(Surgical Procedure, Robotic)) AND ALL=(Surgical Procedures, Robotic)) AND ALL=(doctor-patient relation)) OR ALL=(medical relation)) AND ALL=(trust)) OR ALL=(acceptance)) OR ALL=(satisfaction)

SEARCH FILTERS	
TIME COURSE	Last 5 Years
IDIOM	English and Spanish
TYPES OF PUBLICATION	No filter for publication type
TYPE OF ACCESS	Open access
AREA/SUBAREA	No filter for area and subarea

INCLUSION CRITERIA	
Criterion 1	Only articles published in journals
Criterion 2	Languages: English and Spanish
Criterion 3	Peer-reviewed journals

EXCLUSION CRITERIA	
Criterion 1	Duplicate articles
Criterion 2	Systematic reviews, systematic mapping, Case Serie and experience report
Criterion 3	Articles that do not feature open access
Criterion 4	It is not an article although it is classified as such in a journal (editorials, essays, book reviews...)
Criterion 5	Articles not available in PDF format
Criterion 6	Articles not yet published
Criterion 7	Articles not related to the research topic

ANEXO A - PESQUISA SUBMETIDA AO COMITÊ DE ÉTICA EM PESQUISA DA UFCSPA

IRMANDADE DA SANTA CASA DE MISERICORDIA DE PORTO ALEGRE - ISCMPA

Plataforma Brasil

PARECER CONSUBSTANCIADO DO CEP

DADOS DA EMENDA

Título da Pesquisa: O DESENVOLVIMENTO DA CONFIANÇA NAS DIFERENTES FASES DOS RELACIONAMENTOS EM SERVIÇO DE SAÚDE

Pesquisador: Mellina da Silva Terres

Área Temática:

Versão: 3

CAAE: 46649121.4.0000.5335

Instituição Proponente: IRMANDADE DA SANTA CASA DE MISERICORDIA DE PORTO ALEGRE

Patrocinador Principal: Financiamento Próprio

DADOS DO PARECER

Número do Parecer: 5.178.683

Apresentação do Projeto:

Projeto de pesquisa a ser realizado com pacientes e funcionários da Santa Casa de Misericórdia de Porto Alegre, que tem como objetivo investigar a confiança nas diferentes fases de relacionamento de serviço de saúde e consumidores, através de um questionário enviado por email ou contato telefônico, sendo que a participação inicial será de 600 pacientes com o uso de um pré teste do projeto, e após com envio de até 400.000 . No caso dos pacientes os mesmos podem ser captados com a condição de ter consultado nos últimos 2 anos.

Objetivo da Pesquisa:

Já referido em parecer anteriormente emitido.

Avaliação dos Riscos e Benefícios:

Já referido em parecer anteriormente emitido.

Comentários e Considerações sobre a Pesquisa:

Já referido em parecer anteriormente emitido.

Considerações sobre os Termos de apresentação obrigatória:

Apresentados e adequados.

Conclusões ou Pendências e Lista de Inadequações:

Esta emenda propõe a realização da coleta de dados de forma presencial prevendo também a proteção de dados em função da LGPD e um novo cronograma previsto para 03/01/22.

Endereço: R. Profº Annes Dias,295 Hosp.Dom Vicente Scherer
Bairro: 6º andar - Centro **CEP:** 90.020-090
UF: RS **Município:** PORTO ALEGRE
Telefone: (51)3214-8571 **Fax:** (51)3214-8571 **E-mail:** cep@santacasa.tche.br

IRMANDADE DA SANTA CASA DE MISERICORDIA DE PORTO ALEGRE - ISCMPA

A pesquisa encontra-se de acordo com a Norma vigente Resolução 466/12 para pesquisa em seres humanos.

Considerações Finais a critério do CEP:

Após avaliação das alterações efetuadas no estudo acima descrito, o presente Comitê não encontrou óbices quanto à implementação das mesmas.

Este parecer foi elaborado baseado nos documentos abaixo relacionados:

Tipo Documento	Arquivo	Postagem	Autor	Situação
Informações Básicas do Projeto	PB_INFORMAÇÕES_BÁSICAS_1855920_E1.pdf	08/11/2021 19:47:04		Aceito
Outros	Emenda.docx	08/11/2021 19:40:15	Maria Eulália Vinadé Chagas	Aceito
Projeto Detalhado / Brochura Investigador	Projeto.docx	08/11/2021 19:22:41	Maria Eulália Vinadé Chagas	Aceito
TCLE / Termos de Assentimento / Justificativa de Ausência	ANEXO1_TERMO_DE_CONSENTIMENTO_LIVRE_E_ESCLARECIDO.pdf	26/07/2021 19:31:24	Maria Eulália Vinadé Chagas	Aceito
Folha de Rosto	FolhadeRostoPB.pdf	30/04/2021 17:00:11	Mellina da Silva Terres	Aceito

Situação do Parecer:

Aprovado

Necessita Apreciação da CONEP:

Não

PORTO ALEGRE, 20 de Dezembro de 2021

Assinado por:
JOÃO CARLOS GOLDANI
(Coordenador(a))

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ANEXO B - TERMO DE ANUÊNCIA

REPÚBLICA FEDERATIVA DO BRASIL
MINISTÉRIO DA EDUCAÇÃO

UFCSPA
UNIVERSIDADE FEDERAL DE CIÊNCIAS DA SAÚDE DE PORTO ALEGRE
Rua Sarmento Leite, 245 - Fones: 0 xx 51 3303 9000 - Fax: 0 xx 51 3303.8810
CEP 90050-170 - Porto Alegre - RS - www.ufcspa.edu.br

TERMO DE ANUÊNCIA DO RESPONSÁVEL PELO SETOR OU INSTITUIÇÃO ONDE SERÁ REALIZADA A PESQUISA.

Título do projeto de Pesquisa

O Desenvolvimento da Confiança nas Diferentes Fases dos Relacionamentos em Serviços de Saúde

Eu,_Prof. Dr. Antonio Nocchi Kalil, Diretor Médico e de Ensino e Pesquisa da Santa Casa de Misericórdia de Porto Alegre, tenho ciência dos ajustes no projeto de pesquisa acima citado em função da pandemia Covid-19, desenvolvido pela Prof. Dra. Mellina da Silva Terres, dos objetivos e metodologia a ser utilizada, concordando com a realização da pesquisa neste local através de uma pesquisa on-line com os pacientes.

Data 18/12/2020

Antonio Nocchi Kalil
Diretor Médico e de Ensino e Pesquisa da
Santa Casa de Misericórdia de Porto Alegre