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Análise comparativa entre os fatores associados à escolha da intervenção percutânea e cirúrgica no tratamento da doença arterial coronariana: Revisão integrativa

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Comparative analysis of factors associated with the choice of percutaneous and surgical intervention in the treatment of coronary artery disease: An integrative review

Este Trabalho de Conclusão de Curso foi julgado adequado para obtenção do título de **Comparative analysis of factors associated with the choice of percutaneous and surgical intervention in the treatment of coronary artery disease: An integrative review** e aprovado em sua forma final pelo Curso de Medicina

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RESUMO

A Doença Arterial Coronariana (DAC) está entre as patologias que mais acarretam uma alta taxa de mortalidade no Brasil, em associação a um aumento expressivo de fatores de risco cardiovascular. Nesse contexto, o presente projeto de revisão de literatura integrativa tem por objetivo analisar comparativamente os fatores que influenciam a escolha adequada entre a intervenção coronária percutânea (ICP) e a cirurgia de revascularização miocárdica (CRM) no manejo dessa condição, considerando variáveis clínicas, anatômicas e o escore SYNTAX. A DAC apresenta um espectro amplo de manifestações clínicas, e a decisão terapêutica depende de características individuais dos pacientes, incluindo a complexidade das lesões, idade, comorbidades associadas e função ventricular. A CRM é a alternativa clínica preferencialmente utilizada em pacientes com doença difusa e anatomia coronariana complexa, enquanto a ICP demonstra melhores resultados em lesões menos graves, com recuperação mais rápida. Em vista do exposto anteriormente, a pesquisa adotará uma abordagem integrativa de revisão da literatura, buscando consolidar evidências dos últimos cinco anos com a finalidade de compreender os critérios utilizados na prática clínica e suas implicações nos desfechos em saúde. A análise comparativa pretende fomentar um manejo mais personalizado da DAC, promovendo escolhas terapêuticas baseadas em evidências que otimizem os resultados para diferentes perfis de pacientes.

Palavras-chave: Intervenção Coronariana Percutânea, Cirurgia de Revascularização, Doença Arterial Coronariana.

ABSTRACT

Coronary Artery Disease (CAD) is among the pathologies responsible for high mortality rates in Brazil, associated with a significant increase in cardiovascular risk factors. In this context, the purpose of this integrative literature review is to analyze and compare the factors influencing the appropriate choice between percutaneous coronary intervention (PCI) and coronary artery bypass grafting (CABG) in managing this cardiac condition, considering clinical and anatomical variables and the SYNTAX score. CAD presents a broad spectrum of clinical manifestations, and the therapeutic decision depends on individual patient characteristics, including lesion complexity, age, associated comorbidities, and ventricular function. CABG is the preferred clinical alternative for patients with diffuse disease and complex coronary anatomy, while PCI demonstrates better results in less severe lesions with faster recovery. Given the above, this research adopts an integrative literature review approach, seeking to consolidate evidence from the last five years to understand the criteria used in clinical practice and their implications for health outcomes. This comparative analysis aims to promote a more personalized management of CAD, assisting evidence-based therapeutic choices that optimize results for different patient profiles.

Keywords: Percutaneous Coronary Intervention, Coronary Artery Bypass Grafting, Coronary Artery Disease.

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LISTA DE ABREVIATURAS E SIGLAS

DAC Doença arterial coronariana
ICP Intervenção Coronária Percutânea
CRM Cirurgia de Revascularização Miocárdica
CAD Coronary artery disease
PCI Percutaneous coronary intervention
CABG Coronary Artery Bypass Grafting
GBD Global burden of disease
CKD Chronic Kidney Disease
MACCE Major Adverse Cardiac and Cerebrovascular Events
SS - SYNTAX Score
RCTs Randomized clinical trials
ULMCAD Unprotected Left Main Coronary Artery Disease
PCF Post-procedural Coronary Flow
GNC Guideline-Non-Concordant
GCO Guideline-Concordant
SSII-2020 SYNTAX II trial
ARD Absolute Risk Difference
FEVE Fração de Ejeção do Ventrículo Esquerdo.
STS-PROM Society of Thoracic Surgeons – Predicted Risk of Mortality
OR Odds Ratio
CI Confidence interval
HR Hazard Ratio

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Análise comparativa entre os fatores associados à escolha da intervenção percutânea e cirúrgica no tratamento da doença arterial coronariana: revisão integrativa

Análisis comparativo de los factores asociados a la elección de la intervención percutánea y quirúrgica en el tratamiento de la enfermedad arterial coronaria: revisión integrativa

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1.1. Introduction

Coronary Artery Disease (CAD) represents one of the main health problems in Brazil, being responsible for reduced quality of life and high mortality. Data from the Global Burden of Disease (GBD) show an increase in the number of individuals with CAD from 1.48 million in 1990 to more than 4 million in 2016, with an increase in gross prevalence from 0.99% to 1.85% (Oliveira et al., 2022). In the 2021 year, the standardized mortality rate was 67.1/100,000 inhabitants (De Oliveira et al., 2024). The increase in morbidity and mortality is related to the growth of classic risk factor such as hypertension, dyslipidemia, obesity, sedentary lifestyle, smoking, diabetes, and family history (factors that can mediate prevention) (Précoma et al., 2019).

The therapeutic choice between percutaneous coronary intervention (PCI), coronary artery bypass grafting (CABG), or clinical treatment must consider individual risk, SYNTAX score II, and evidence-based clinical judgment (Marinho et al., 2018). The SYNTAX score is a valuable tool, especially in cardiac anatomical variations, assessing the number of affected arteries and lesion complexity (Okraïneć et al., 2004; Serruys et al., 2009a; De Souza et al., 2018). Patients with reduced ejection fraction present higher risk, with CABG being preferred for enabling more complete revascularization (Bassan et al., 2025).

In this sense, comorbidities such as diabetes and chronic kidney disease (CKD) are determinants for the choice: diabetes is associated with diffuse CAD and worse outcomes after PCI, being a variable incorporated into SYNTAX II (Lawton et al., 2022). Furthermore, the glomerular filtration rate in CKD is an essential criterion for therapeutic decision-making (Neumann et al., 2019). For example, studies as SYNTAX and FAME II confirmed that in lesions of moderate to high complexity, CABG is associated with lower long-term mortality, although PCI reduces ischemic events compared to clinical treatment (Lawton et al., 2022). In view of aforementioned, this review aims to comparatively analyze the factors associated with the choice between PCI and CABG, identifying the best option to optimize prognosis.

1.2. Methods

This current study adopted an integrative literature review approach, following rigorous steps to ensure the validity and reliability of results based on recent scientific production.

Population and sample

The search was conducted in the PubMed database, using combinations of health descriptors (DeCS/MeSH): "Coronary Artery Disease", "Percutaneous Coronary Intervention", "Coronary Artery Bypass Grafting", and "SYNTAX Score". The population evaluated in these studies consisted of adult patients diagnosed with CAD of moderate to high anatomical complexity (including those with Left Main CAD and multivessel disease (three-vessel disease)). Besides that, the sample encompassed high-risk clinical subgroups, such as patients with Type 2 Diabetes Mellitus and ventricular dysfunction, which underwent comparative revascularization procedures via PCI or CABG. The final sample consisted of 13 selected studies, published between 2020 and 2025, available in full text in English and Portuguese.

Inclusion criteria

Studies were included whether they met the following criteria: (1) involved patients diagnosed with CAD; (2) compared PCI and CABG treatments; (3) encompassed clinical outcomes such as mortality, adverse events, and the need for reintervention; (4) were randomized clinical trials, observational studies, systematic reviews, or relevant guidelines. Theses, dissertations, book chapters, and consensus statements that fell outside the scope of direct comparative analysis between interventions were excluded.

Data analysis

The selection process occurred in two stages: exploratory reading of titles and abstracts by two independent reviewers, followed of full analytical reading to verify eligibility. The methodological quality of the studies was guided by the PRISMA checklist. Data extracted (patient characteristics, selection criteria, and outcomes) were organized into tables for qualitative and descriptive analysis, seeking to identify patterns and divergences between therapeutic strategies.

Ethical Aspects

As this is an integrative review using secondary data from the public domain, the paper was exempt from research ethics committee approval, since the selected publications

had already undergone prior committee approval. Copyrights and the integrity of original information were respected, ensuring proper citation of sources and the absence of conflicts of interest and external funding.

Study Design

This study was conducted according to the methodological framework of an Integrative Literature Review, structured in six distinct stages: (1) identification of the theme and formulation of the guiding question ("Which clinical and anatomical factors influence the decision between Percutaneous Coronary Intervention and Coronary Artery Bypass Grafting, and how do they impact the prognosis of patients with Coronary Artery Disease?"); (2) establishment of inclusion and exclusion criteria; (3) definition of information to be extracted from selected studies; (4) evaluation of the included studies; (5) interpretation of results; (6) presentation of the review/knowledge synthesis. Still, this review was reported in accordance with the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) statement guidelines.

1.3. Results and discussion

The present integrative review analyzed contemporary scientific evidence comparing PCI and CABG, reinforcing that the therapeutic decision for complex CAD is multifactorial and cannot be based solely on angiographic findings. The results showed that, while CABG remains the standard of care for high anatomical complexity and diabetes, "state-of-the-art" PCI has narrowed the gap in selected outcomes.

Overview of selected studies

The scientific literature search resulted in the inclusion of 13 studies published between 2020 and 2025 that met the eligibility criteria. The final sample comprises randomized clinical trials (RCTs), observational cohorts with long-term follow-up (up to 10 years), and systematic reviews with meta-analyses. The studies compared PCI and CABG in patients with complex coronary anatomy, including Left Main CAD and multivessel disease. Table 1 summarizes the characteristics and main findings of studies utilized in current review.

Table 1. Summary of studies comparing PCI and CABG (2020–2025).

Title	Authors	Type of study	Number of participants	Year/ Country	Results
Ten-Year Outcomes After Percutaneous Coronary Intervention Versus Coronary Artery Bypass Grafting for Left Main Coronary Disease: Extended Follow-Up of the MAIN-COMPARE Study	Yoon, S-H. et al.	Observational registry (10-year follow-up)	1.580	2020 / South Korea	Among 1,580 patients, according to the distribution of the SYNTAX Score (SS), 34.6% were low, 22.2% intermediate, and 43.2% high. For high SS, the risk of PCI and CABG diverged significantly over 10 years. High SS and PCI showed a higher risk of death and a tendency toward worse outcomes. SS presented significant prognostic impact only in the PCI group, and not in the CABG group.
Outcomes of Left Main Revascularization after Percutaneous Intervention or Bypass Surgery	Scudiero, F. et al.	Prospective registry	558	2022 / Italy	In patients with ULMCAD, half with SYNTAX Score > 32, PCI and CABG presented similar composite outcomes at 4 years, but revascularization guided by ischemia was more frequent after PCI. Diabetes and EuroSCORE were the main predictors of outcomes.
Follow-Up and Outcome after Coronary	Hamiko, M. et al.	Retrospective study	997	2023 / Germany	Among 997 patients submitted to CABG, those

Bypass Surgery Preceded by Coronary Stent Implantation					with prior PCI (PCF) had more reinfarction, reangiography, and PCI than patients without prior PCI (no PCF). In the PCF group, those who did not follow the guidelines (GNC) had worse health, a higher SYNTAX score, and more left main stenosis than those who did follow them (GCO).
External Validation of the SYNTAX Score II 2020	Yamaji, K. et al.	External validation of score	7.362	2020 / Japan (CRED O-Kyoto)	The SSII-2020 predicted mortality at 5 years after PCI and CABG. For patients with absolute risk difference (ARD) predicted < 4.5%, mortality was similar for PCI and CABG. For ARD ≥ 4.5%, CABG showed superior survival rates. For MACCE, SSII-2020 didn't clearly guide the better treatment.
Percutaneous coronary intervention in unprotected left main coronary artery stenosis: Mid-term outcomes of a single-center observational study	Kumar, S. et al.	Retrospective, single-center registry	661	2022 / India	In 661 patients with ULMCA submitted to PCI (mean age 63,5 years, mean SYNTAX 27,9, FEVE 58%), 54% had 3 vessels diseases and 70,6% distal injuries. he in-

					hospital MACCE rate was 8.8%, and during follow-up it was 11.5% (8.4% cardiac deaths). Survival at 1, 3, and 5 years was 94%, 88%, and 84%, respectively. Age > 65 years and SYNTAX Score were independent predictors of mid- and long-term mortality.
Physiology-guided PCI versus CABG for left main coronary artery disease: insights from the DEFINE-LM registry	Warisawa, T. et al.	Multicenter international registry	151	2023 / International (Europe, USA, Japan)	After 2.8 years, MACE in 8.3% in the PCI group and 8.8% in the CABG group (p = 0.043). FFR-guided PCI showed a lower rate of events in patients with intermediate complexity.
Multidisciplinary Heart Team Approach for Complex Coronary Artery Disease: Single Center Clinical Presentation	Young, M. N. et al.	Prospective single-center study	166	2020 / USA	In 166 high-risk patients (mean age 70 years, STS-PROM 3.6%, SYNTAX score 26), PCI was performed in 47.6% and CABG in 29.5%. A higher STS-PROM reduced the indication for CABG and increased medical therapy, and the SYNTAX score did not influence the choice. In-hospital mortality was 3.9% and at 30 days was 4.8%.
Percutaneous coronary	Xie et al	Cumulative meta-	4.566	2021 / China	CABG showed lower all-cause

intervention versus coronary artery bypass grafting in patients with coronary heart disease and type 2 diabetes mellitus: Cumulative meta-analysis.		analysis of randomized clinical trials			mortality, lower cardiac mortality, and lower need for repeat revascularization, while there was no difference in heart attack rate. PCI showed a smaller stroke rate. Differences in mortality emerged mainly after 3–5 years of follow-up.
Ten-year outcomes after percutaneous coronary intervention versus coronary artery bypass grafting for multivessel or left main coronary artery disease: a systematic review and meta-analysis	Feng S et al	Systematic review and meta-analysis (10-year follow-up)	Aggregated from clinical studies (8,621 patients: 3,013 participants from 5 randomized clinical trials and 5,608 participants from 4 observational studies)	2024 / International	No significant difference in mortality (OR = 1.03; 95% CI: 0.89–1.19), but PCI with a higher need for repeat revascularization (OR = 1.77; 95% CI: 1.08–2.89).
Five-year outcomes after state-of-the-art percutaneous coronary revascularization in patients with de novo three-vessel disease: final results of the SYNTAX II study	Banning, A.P. et al.	Prospective study (5-year follow-up)	454	2022 / Europe	The SYNTAX II strategy reduced mortality by 43% compared with SYNTAX I (HR = 0.57; 95% CI: 0.37–0.90).
Percutaneous Coronary Intervention Versus	Gaba, P. et al.	Combined analysis of 4 randomized	4.393	2024 / Multicenter, international	Five-year mortality was similar between PCI and

Coronary Artery Bypass Grafting in Patients With Left Main Disease With or Without Diabetes		ed clinical trials		ional	CABG (15.3% vs 14.1% in diabetics; 9.7% vs 8.9% in non-diabetics), but PCI showed a higher risk of spontaneous infarction (HR 2.01) and repeat revascularization (HR 2.12), especially in patients with diabetes, who had the highest excess of absolute risk over follow-up.
Comparative Efficacy of Percutaneous Coronary Intervention Versus Coronary Artery Bypass Grafting in the Treatment of Ischemic Heart Disease: A Systematic Review and Meta-Analysis of Recent Randomized Controlled Trials	LlerenaVelastegui, J. et al.	Systematic review and meta-analysis	Aggregated from clinical studies (11,464 patients participating in 11 randomized clinical trials)	2024 / International	CABG reduced reinfarction and reintervencions; PCI showed a lower risk of stroke.
Percutaneous Coronary Intervention Versus Coronary Artery Bypass Grafting for Revascularization of Left Main Coronary Artery Disease	Park, S. et al	Narrative review	Aggregated from clinical studies (EXCEL: 1905 patients; NOBLE: 1,201 patients; SYNTAX:	2023/ South Korea	CABG had fewer late myocardial infarctions and less repeat revascularization. PCI had worse results in NOBLE, but similar to CABG in EXCEL. The result depends on anatomical

			705 patients; PRECOM BAT: 600 patients)		complexity.
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Mortality and Long-Term Survival

The analysis of long-term data (up to 10 years) indicates that survival benefits are often time-dependent and anatomy-specific. In study of Yoon et al. (2020) was demonstrated that for patients with high anatomical complexity (SYNTAX score ≥ 33), CABG provided a significant survival advantage, whereas no difference was observed for low-to-intermediate scores. These findings corroborate with the meta-analysis conducted by Feng et al. (2024), which found no significant difference in overall mortality between the two strategies across the general cohort, although CABG showed better durability.

Revascularization and Complications

A consistent finding across the selected studies is the "trade-off" between repeat revascularization and stroke. Multiple studies, including the meta-analyses of Feng et al. (2024) and Llerena-Velastegui et al. (2024), confirmed that PCI is associated with a significantly higher rate of repeat revascularization and spontaneous myocardial infarction. Conversely, CABG is associated with a higher risk of cerebrovascular events (stroke) in the perioperative period.

Impact of Diabetes Mellitus

Diabetes Mellitus emerged as a critical modifier of treatment efficacy. In the studies of Xie et al. (2021) and Gaba et al. (2024) were provided robust evidence that in diabetic patients, particularly those with Left Main disease, CABG is associated with lower long-term mortality and fewer major adverse cardiac events compared to PCI. Although, Gaba et al. emphasized that the absolute risk difference for adverse events is more pronounced in diabetic patients, favoring surgical revascularization.

Role of SYNTAX Score and New Technologies

While the SYNTAX score remains a powerful prognostic tool for mortality in PCI patients, recent evidence suggested that technological advances may mitigate some risks of PCI. In this context, Banning et al. (2022) showed that "state-of-the-art" PCI utilizing drug-eluting stents, intravascular imaging, and physiological guidance (iFR/FFR, can achieve 5-year outcomes comparable to CABG in patients with three-vessel disease, challenging historical paradigms for selected patients.

Anatomical Complexity and the SYNTAX Score

Our main findings of this current report are in accordance with historical data from the SYNTAX trial, confirming that anatomical complexity is a major determinant of survival. In study of Yoon et al. (2020) was demonstrated that in patients with a SYNTAX score ≥ 33 , CABG offers a clear survival benefit over 10 years. However, for low-to-intermediate scores, the mortality gap disappears. Interestingly, Young et al. (2020) observed that in real-world "Heart Team" meetings, the decision is often driven more by surgical risk (STS score) and patient frailty than by the SYNTAX score alone, suggesting an change for a more holistic patient assessment rather than a purely anatomy-based one.

The Diabetic Patient: A Critical Subgroup

It's known that diabetes mellitus remains a decisive factor favoring surgery. The meta-analysis performed by Xie et al. (2021) and the pooled analysis conducted by Gaba et al. (2024) provided robust evidence that diabetic patients with multivessel or Left Main disease have significantly better survival and fewer major adverse cardiovascular events

(MACE) with CABG. This finding is corroborated by the diffuse nature of atherosclerosis in diabetic patients, in this case the surgical grafting bypasses the entire diseased segment, whereas stents treat only localized lesions.

Procedural Outcomes: The Trade-off

The choice between PCI and CABG involves a trade-off between invasiveness and durability. Both Feng et al. (2024) and Llerena-Velastegui (2024) highlighted that while PCI offers a faster recovery and lower risk of periprocedural stroke, it carries a significantly higher burden of repeat revascularization. In the other hand, CABG provided a more durable solution but at the cost of higher initial morbidity and stroke risk. This "trade-off" must be discussed transparently with the patient during the informed consent process.

Technological Evolution

A novel finding demonstrated in this review is the impact of physiological guidance (FFR/iFR) and intravascular imaging (IVUS/OCT). Studies conducted by Banning et al. (2022) and Warisawa et al. (2023) suggested that when PCI is guided by these modern tools, outcomes in 3-vessel disease can be comparable to CABG at 5 years. This challenges the dogma that all multivessel diseases require surgery, opening a window for PCI in complex cases, provided that optimal technique is used.

Limitations

This present review of scientific literature has some limitations related to the methodology. The inclusion of observational studies introduced selection bias, due the patients eligible for both procedures (clinical equipoise) differ from those referred exclusively for one method. Furthermore, the definition of "complex CAD" varied slightly across the studies.

1.4. Conclusion

This integrative review consolidated current evidence regarding the therapeutic choice for complex CAD, demonstrating that the decision between PCI and CABG is no longer a binary dispute, but a spectrum of individualized indications. The analysis confirms that CABG remains the gold standard for patients with high anatomical complexity (high

SYNTAX score) and being crucially, for those with diabetes mellitus. In these subgroups, surgery offers superior long-term survival and durability, minimizing the need for repeat revascularization. However, PCI has established itself as a non-inferior and attractive strategy for patients with low-to-intermediate complexity. A major finding of this review is that the implementation of "state-of-the-art" PCI guided by intravascular imaging and physiology (FFR/iFR), has the potential to equalize outcomes in selected multivessel disease cases, challenging historical limitations. Therefore, we concluded that clinical practice must shift from a purely angiographic focus to an Integrated Heart Team approach. The decision-making process should integrate the SYNTAX score with clinical variables (frailty, comorbidities) and patient preferences regarding the trade-off between the invasiveness of surgery and the reintervention risk of stenting. Future research should focus on the long-term durability of physiology-guided PCI to determine if the surgical advantage persists in the era of precision medicine.

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Conflict of interest

The authors declare that they have no conflict of interest.

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2. APÊNDICE - NORMAS DO PERIÓDICO CIENTÍFICO

Research, Society and Development – ISSN: 2525-3409

Diretrizes para Autores

1) Estrutura do texto:

Título nesta sequência: Inglês, Português e Espanhol.

Os autores do artigo (devem ser colocados nesta sequência: nome, ORCID, instituição, e-mail). NOTA: O número do ORCID é individual para cada autor e é necessário para o registro no DOI; em caso de erro, não é possível realizar o registro no DOI.

Resumo e Palavras-chave nesta sequência: Português, Inglês e Espanhol (o resumo deve conter o objetivo do artigo, a metodologia, os resultados e a conclusão do estudo. Deve ter entre 150 e 250 palavras). Para as Palavras-chave, recomendam-se de 3 a 5 palavras, com um máximo de 7, e para artigos na área da saúde, recomenda-se o uso de descritores DeCS (Descritores em Ciências da Saúde da BVS).

Corpo do texto (deve conter as seções: 1. Introdução, na qual constam o contexto, o problema estudado e o objetivo do artigo; 2. Metodologia utilizada no estudo, bem como os autores que a fundamentam; 3. Resultados (ou, alternativamente, 3. Resultados e Discussão, renumerando os demais subitens), 4. Discussão e 5. Considerações finais ou Conclusão);

Referências: (Autores, o artigo deve ter pelo menos 20 referências, as mais atuais possíveis. Tanto a citação no texto quanto o item de Referências devem utilizar o estilo de formatação da APA - American Psychological Association. As referências devem ser completas e atualizadas. Colocadas em ordem alfabética crescente, pelo sobrenome do primeiro autor da referência, não devem ser numeradas, devem ser inseridas em tamanho 8 e espaçamento 1,0, separadas entre si por uma linha em branco).

2) Layout:

Formato Word (.doc);

Escrito com espaçamento entrelinhas de 1,5, usando fonte Times New Roman tamanho 10, no formato A4, e as margens do texto (inferior, superior, direita e esquerda) devem ser de 1,5 cm;

Os recuos são feitos na régua do editor de texto (não pela tecla TAB);

Os artigos científicos devem ter mais de 5 páginas.

3) Figuras:

O uso de imagens, tabelas e ilustrações deve seguir o bom senso e, preferencialmente, a ética e a axiologia da comunidade científica que discute os temas do manuscrito. Nota: o tamanho máximo do arquivo a ser submetido é de 10 MB.

Figuras, tabelas, quadros, etc. devem ter sua chamada no texto antes de serem inseridos. Após sua inserção, deve constar a fonte (de onde a figura ou tabela foi retirada) e um parágrafo de comentário informando o que é importante que o leitor observe neste recurso. As figuras, tabelas e quadros devem ser numerados em ordem crescente, os títulos das tabelas, figuras ou quadros devem ser colocados na parte superior e as fontes na parte inferior.

4) Autoria:

No momento da submissão, o arquivo Word anexado NÃO DEVE conter os nomes dos autores. Os nomes dos autores devem ser incluídos apenas nos metadados (cadastro) da revista.

Na versão final (template), após a avaliação, os nomes de todos os autores (nome completo, ORCID, instituição, e-mail) devem ser incluídos no início (antes dos resumos), bem como nos metadados, em ordem de importância e contribuição para a construção do texto. Orientadores, se houver, devem ser incluídos por último.

O artigo pode ter no máximo 7 autores. Em casos excepcionais, é necessária a consulta prévia à Equipe da Revista.

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Pesquisas envolvendo seres humanos devem apresentar e/ou informar o número de registro e aprovação do Comitê de Ética e Pesquisa - CEP e/ou Comissão Nacional de Ética em Pesquisa, conforme recomendado pelo Ministério da Saúde, Conselho Nacional de Saúde (Res. 466/2012; cap. XII.2), e o Termo de Consentimento Livre e Esclarecido.

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6) Exemplo de referências no formato APA:

Artigo de periódico:

Gohn, M. G. & Hom, C. S. (2008). Abordagens Teóricas para o Estudo dos Movimentos Sociais na América Latina. Caderno CRH, 21 (54), 439-455.

Livro:

Ganga, G. M. D.; Soma, T. S. & Hoh, G. D. (2012). Trabalho de conclusão de curso (TCC) na engenharia de produção. Atlas.

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Conhecer o foco, o escopo e a concepção da revista Research, Society and Development, bem como as diretrizes para submissão.

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Preparar o artigo científico em conformidade com a ética e a metodologia científica de redação do trabalho.

Não submeter o artigo simultaneamente a outra revista.

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