Research Proposal

Design and Creative Technologies

Torrens University, Australia

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Exploring the Relationship between Net Promoter Score and Revenue Growth in Healthcare Clinics

1. Abstract

This study investigates whether the Net Promoter Score (NPS) is statistically correlated with revenue growth in healthcare clinics. While NPS is widely used as a measure of patient satisfaction and loyalty, limited empirical research validates its direct financial impact in the healthcare context. Adopting a quantitative correlational design within a pragmatic-positivist paradigm, this research will analyze a three-year dataset (2022–2025) from Pro-Corpo Estética, a network of Brazilian clinics. Monthly NPS and revenue data will be examined using descriptive statistics, Pearson correlation, and linear regression to determine the strength and direction of their relationship.

By establishing empirical evidence on how patient experience metrics align with business outcomes, the research will contribute actionable insights for healthcare managers. The project also aligns with Torrens University's "Here for Good" ethos, promoting responsible data-driven innovation that supports both patient care quality and sustainable business performance.

2. Introduction

In an era where healthcare organizations face mounting pressure to balance patient-centered care with financial sustainability, analytics play a pivotal role in uncovering hidden relationships between satisfaction metrics and operational outcomes (Press Ganey, 2023). The Net Promoter

Score (NPS), a single-question metric gauging customers' likelihood to recommend a service on a 0-10 scale (Reichheld, 2003), has gained traction as a proxy for loyalty. However, in healthcare clinics, the link between NPS and tangible business results like revenue growth remains underexplored, often overshadowed by qualitative patient feedback or anecdotal evidence. This gap hinders evidence-based decision-making, particularly for AI-enabled systems that could automate NPS analysis to predict revenue trends. Understanding this relationship could guide managerial strategies, such as targeted interventions to boost patient retention and referrals, ultimately fostering sustainable growth.

This project proposes an ICT-driven framework leveraging data analytics and business intelligence tools to examine NPS trends against financial performance in clinical settings. The research questions are: (1) To what extent is NPS correlated with revenue growth in healthcare clinics? (2) What is the direction and strength of this relationship? The aim is to investigate the statistical association between NPS and revenue growth, with objectives including developing a correlational ICT model, analyzing historical data, and deriving actionable insights for stakeholders. Hypothesis: H1 – There is a positive and significant correlation between NPS and revenue growth ($r > 0.3$, $p < 0.05$). This aligns with Torrens University's "Here for Good" ethos by promoting ethical, data-informed innovations that enhance patient well-being while supporting equitable and sustainable healthcare practices, ensuring societal benefits through responsible R&D.

3. Literature Review

3.1. Customer Experience and Performance Metrics

Customer experience (CX) metrics, such as NPS, CSAT, and CES, are foundational in service industries for predicting business performance (Lemon & Verhoef, 2016). Critically, while these metrics capture sentiment, their predictive validity varies; NPS stands out for its simplicity but has been critiqued for oversimplifying complex behaviors (Keiningham et al., 2007). In broader business contexts, studies show CX drives 20-30% of revenue variance (Forrester, 2022), yet this is often moderated by sector-specific factors like trust.

3.2. NPS and Business Outcomes

Introduced by Reichheld (2003), NPS categorizes respondents as Promoters (9-10), Passives (7-8), and Detractors (0-6), with the score as (Promoters % - Detractors %). Empirical evidence links higher NPS to growth; for instance, a Bain & Company study (2021) found companies with NPS >50% grew 2x faster than competitors. However, critics argue correlation does not imply causation, as external variables (e.g., market conditions) confound results (Schneider et al., 2009). In non-healthcare sectors like retail, NPS correlates with revenue (r=0.45-0.60; Owen & Brooks, 2009), but longitudinal data is scarce.

3.3. Patient Experience in Healthcare

In healthcare, patient experience encompasses clinical and emotional aspects, with NPS adapted to measure loyalty amid rising consumerism (Press Ganey, 2023). Studies indicate

high NPS links to retention (e.g., 15% higher repeat visits; Doyle et al., 2013), but financial ties are weaker. For example, a US hospital analysis showed NPS positively associated with margins (r=0.32; Fenton et al., 2012), yet Brazilian contexts, like Pro-Corpo Estética, lack similar scrutiny, where cultural factors may amplify word-of-mouth effects (Torres & Tribó, 2011). Gaps persist in integrating ICT for real-time NPS tracking.

3.4. Quantitative Approaches in Service Analytics

Quantitative methods dominate CX research for objectivity (Creswell & Creswell, 2018). Correlational designs using Pearson/r and regression (e.g., via statsmodels in Python) reveal relationships without manipulation, ideal for archival data (Field, 2018). Mixed methods add depth but risk complexity; qualitative alone lacks generalizability (Saunders et al., 2019). ICT frameworks, like data pipelines in pandas, enable triangulation (e.g., descriptive stats + regression), enhancing validity (Yin, 2018). However, limitations include data quality issues in healthcare datasets.

3.5. Identified Knowledge Gap and Research Contribution

Synthesis reveals a gap: While NPS-business links exist in general services, healthcare-specific empirical validation is limited, especially in emerging markets like Brazil (gap noted in Ass1). This study fills it by applying an ICT model to real-world data, contributing to R&D by informing AI feedback systems for "Here for Good" outcomes—ethical, sustainable healthcare.

Figure X: Customer Experience → NPS Score → Loyalty → Revenue Growth

4. Methodology and Methods

4.1. Research Design and Philosophical Orientation

Customer experience research has evolved from qualitative satisfaction measures toward quantitative indices such as NPS and Customer Effort Score (Bryman 2016; Creswell & Plano Clark 2023). Dawes (2024) emphasizes that NPS captures both affective and behavioral loyalty components, while Godovykh and Pizam (2023) demonstrate that positive patient experiences enhance willingness to recommend.

4.2. Data Sources and Sampling

Customer experience research has evolved from qualitative satisfaction measures toward quantitative indices such as NPS and Customer Effort Score (Bryman 2016; Creswell & Plano Clark 2023). Dawes (2024) emphasizes that NPS captures both affective and behavioral loyalty components, while Godovykh and Pizam (2023) demonstrate that positive patient experiences enhance willingness to recommend.

4.3. Data Preparation

Customer experience research has evolved from qualitative satisfaction measures toward quantitative indices such as NPS and Customer Effort Score (Bryman 2016; Creswell & Plano Clark 2023). Dawes (2024) emphasizes that NPS captures both affective and

behavioral loyalty components, while Godovykh and Pizam (2023) demonstrate that positive patient experiences enhance willingness to recommend.

4.4. Analytical Procedures

Customer experience research has evolved from qualitative satisfaction measures toward quantitative indices such as NPS and Customer Effort Score (Bryman 2016; Creswell & Plano Clark 2023). Dawes (2024) emphasizes that NPS captures both affective and behavioral loyalty components, while Godovykh and Pizam (2023) demonstrate that positive patient experiences enhance willingness to recommend.

4.5. Ethical Considerations

Customer experience research has evolved from qualitative satisfaction measures toward quantitative indices such as NPS and Customer Effort Score (Bryman 2016; Creswell & Plano Clark 2023). Dawes (2024) emphasizes that NPS captures both affective and behavioral loyalty components, while Godovykh and Pizam (2023) demonstrate that positive patient experiences enhance willingness to recommend.

4.6. Reliability, Validity and Limitations

Customer experience research has evolved from qualitative satisfaction measures toward quantitative indices such as NPS and Customer Effort Score (Bryman 2016; Creswell & Plano Clark 2023). Dawes (2024) emphasizes that NPS captures both affective and behavioral loyalty components, while Godovykh and Pizam (2023) demonstrate that positive patient experiences enhance willingness to recommend.

5. Conclusion

This proposal formalizes a feasible and ethically sound quantitative study aimed at determining whether patient-experience metrics, measured by NPS, are statistically linked to financial performance in healthcare clinics. By combining descriptive and inferential statistics, the research will clarify whether NPS can serve as a predictive indicator of revenue growth.

The work will contribute to academic and professional knowledge in ICT R&D by demonstrating how data analytics can bridge operational and service-quality domains. Future extensions may incorporate mixed-methods designs that include qualitative feedback or design-science prototypes for automated dashboards.

Ultimately, the research embodies Torrens University's commitment to socially responsible innovation—advancing data-driven healthcare management that improves both patient outcomes and organizational resilience.

6. Proposed Timeline

The overlapping structure enables iterative refinement: preliminary findings from correlation analysis inform regression model specifications, while early visualization prototypes guide final dashboard design.

- Weeks 1-2: Data extraction and cleaning (Milestone: validated dataset ready for analysis)
- Weeks 3-4: Exploratory data analysis and assumption testing (Milestone: confirmed data meets parametric test requirements)
- Weeks 5-6: Correlation analysis for RQ1 (Milestone: Pearson/Spearman correlations computed)

- Weeks 7-8: Regression modeling for RQ2 (Milestone: predictive models validated)

- Weeks 9-10: Robustness checks and sensitivity analysis (Milestone: findings confirmed across subgroups)

- Weeks 11-12: Report writing and visualization development (Milestone: final deliverables complete).

Figure X:Gantt Chart – 12-week research Timeline

7. Appendices

7.1. Appendix A – Company Consent Letter

Signed authorization from Pro-Corpo Estética granting permission to use anonymized data for academic purposes.

7.2. Appendix B – Data Preparation Code Excerpt

Snippet of Python workflow showing cleaning and correlation analysis.

7.3. Appendix C – Gant Chart (12 weeks)

Visual timeline representation for the project schedule.

7.4. Appendix D – Ethics Statement

Compliance declaration aligned with Torrens University and data governance frameworks.

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End of Appendix Section

Statement of Acknowledgment

I acknowledge that I have used the following AI tool(s) in the creation of this report:

- OpenAI ChatGPT (GPT-5): Used to assist with outlining, refining structure, improving clarity of academic language, and supporting APA 7th referencing conventions.

I confirm that the use of the AI tool has been in accordance with the Torrens University Australia Academic Integrity Policy and TUA, Think and MDS's Position Paper on the Use of AI. I confirm that the final output is authored by me and represents my own critical thinking, analysis, and synthesis of sources. I take full responsibility for the final content of this report.

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