

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

RESEARCH PROPOSAL | ASSESSMENT 3

RESEARCH METHODOLOGIES
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THE PROBLEM

NPS widely adopted → But never validated against revenue

RQ1: Can NPS predict revenue growth?

RQ2: How strong is this correlation?



POSITIONING WORK IN THE FIELD

Patient Experience → Loyalty
(Godovykh & Pizam, 2023)

✓ Established

NPS → Intention to recommend
(Reichheld, 2003; Dawes, 2024)

✓ Validated

AI Sentiment Analysis (technical)
(Alkhnabashi et al., 2024)

✓ Feasible

NPS → Revenue in HEALTHCARE
This Study fills this gap

✗ MISSING

Key Gap: Assumed correlation never tested empirically

KNOWLEDGE GAP & CONCEPTUAL FRAMEWORK



Research Gap: No one has tested if this pathway actually works in healthcare

PROPOSED METHODOLOGY

Quantitative Correlational Design (Pragmatic-Positivist)



Triangulation: Temporal + Spatial + Methodological

METHODS & TOOLS

Analytical Workflow:

- Descriptive Statistics (*mean, SD, distribution*)
- Pearson/Spearman Correlation (*strength + direction*)
- Linear Regression (*predictive capacity with lags*)
- K-means Clustering (*clinic behavioral segmentation*)

Ethics & Governance:

- Anonymized data (*clinic-month aggregation*)
- Institutional consent (*Pro-Corpo Estética*)
- Researcher reflexivity statement (*former collaborator*)
- LGPD + GDPR + Australian Privacy Act compliant

```
# Correlation Analysis
correlation = df[['nps', 'revenue']].corr()

# Predictive Regression Model
X_lagged = df[['nps_t1', 'nps_t2']] # Lagged variables
model = LinearRegression().fit(X_lagged, y_revenue)
```



EXPECTED CONTRIBUTIONS & OUTCOMES

Three Possible Results:

Strong Correlation

- Validate NPS as strategic KPI
- Simple tracking systems sufficient
- Cost-effective patient monitoring

Moderate Correlation

- Partial validation (NPS provides some signal)
- Justify AI sentiment enhancement investment
- Richer feedback dimensions needed

Weak Correlation

- Challenge NPS validity in healthcare
- Redirect to NLP-based alternatives
- Capture nuanced emotional/experiential data

Regardless of outcome:

- Evidence-based decision framework
- Quantitative foundation for AI/NLP research
- Replicable ICT R&D methodology

SIGNIFICANCE & IMPACT

Healthcare Managers

- Validate or challenge NPS as financial KPI
- Data-driven patient experience investment decisions
- Cost-benefit analysis: Simple NPS vs. AI complexity

Torrens "*Here for Good*" Ethos

- Sustainable healthcare through evidence-based decisions
- Patient-centered care aligned with financial viability
- Responsible innovation in healthcare technology

Academic Research

- First empirical NPS-revenue study in healthcare context
- Quantitative foundation for AI sentiment analytics
- ICT R&D methodology for business intelligence

Broader Impact

- Replicable framework for service industries
- Bridge between patient experience and business outcomes
- Foundation for future mixed-methods research

Timeline

Phase / Topic	Task	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
1 - Research Proposal		x x x x x x x x x x x x x																																							
Critical Literature Review	Literature Refinement	x																																							
	Ethics & Data Acquisition		x																																						
	Finalize Research Gap Statement			x																																					
Research Tools and Methodologies	Data Cleaning & Preparation				x																																				
	Aggregate by clinic-month					x																																			
	Run Pearson/Spearman tests						x																																		
	Generate scatterplots & heatmaps							x																																	
Research Proposal and Presentation	Integrate findings with theory							x																																	
	Create visualizations								x																																
	Write methodology & results section									x																															
	Apply feedback, edit structure										x																														
	Submit Assessment 3											x																													
2- Analysis Deepening														x x x x x x x x																											
Extended Statistical Analysis	Sensitivity analysis													x																											
	Time-series decomposition													x																											
	Granger causality tests													x																											
Qualitataive Validation	Code 500 text comments													x																											
	Identify emotion categories (anger/relief)													x																											
	Map themes to correlation strength													x x																											
Dashboard Prototype Development	Build NPS-Revenue dashboard (streamlit/jinja)													x x																											
	Implement real-time correlation tracking													x x																											
	Add predictive alerts (revenue dips)													x x																											
Comparative Industry Analysis	Compare healthcare vs. retail NPS-revenue													x x																											
	Literature synthesis across sectors													x x																											
	Position findings in broader context													x x																											
3 - Publication Pathway																						x x																			
Journal Article Prep	Expand methodology (3000-4000 words)													x x																											
	Add cluster analysis visuals													x																											
	Discussion of managerial implications													x x																											
Internal Review & Co-author Feedback	Share with Dr. Bushra Naeem (supervisor)													x x																											
	Incorporate academic feedback													x x																											
	Strenghten theoritcal contrib													x x x																											
Submission & Peer Review	Submit to target journal													x x x x																											
	Respond to reviewer comments													x																											
	Revise methodology - if requested													x																											
Conference Presentation Prep	Create 15-min presentation													x																											
	Poster design													x																											
	Abstract submission (500 words)													x																											
Revised Manuscript & Resubmission	Address all peer review comments													x																											
	Add supplementary materials													x																											
	Proofread and format per journal guidelines													x																											
	Copyediting and galley proofs													x																											

STATEMENT OF ACKNOWLEDGEMENT

I acknowledge that I have used OpenAI's ChatGPT (GPT-5) to assist in the planning, outlining, and refinement of my presentation for HCD402 – Assessment 1. The tool supported me in structuring slide content, improving clarity of written explanations, and enhancing the overall flow of the presentation.

I confirm that the use of the AI tool has been in accordance with the Torrens University Academic Integrity Policy and TUA, Think, and MDS's Position Paper on the use of AI. I confirm that the final presentation and its analysis are authored by me and represent my own understanding, research, and critical thinking. I take full responsibility for the final content of this presentation.

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***T**hank you!*

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