

GENERATIVE AI FINAL PROJECT PRESENTATION

**HTML & SVG VISUAL ABSTRACT BUILT WITH
CLAUDE SONNET 4:**

LIFE SATISFACTION OF PEOPLE LIVING WITH HEPATITIS B IN SENEGAL

PRESENTER: KEVINE TIOGOUO TEZEMENE
DATE: 29/06/2025

Problem / Opportunity

- ▶ Dense 350-word abstract is slow to digest in staff meetings & social feeds.
- ▶ Designing PowerPoint/Posters manually can take hours.
- ▶ Need a LinkedIn-ready asset before peer review to showcase.

Background:

Chronic hepatitis B virus (HBV) infection significantly affects physical and mental health, but its impact on life satisfaction in sub-Saharan Africa remains poorly understood. We evaluated life satisfaction among Senegalese people living with HBV (PLHBV), identified key predictors and assessed whether antiviral treatment influenced well-being.

Methods:

We conducted a cross-sectional analysis of 579 participants from the SEN-B cohort (May 2024-January 2025). Life satisfaction was measured using the validated 5-item Satisfaction with Life Scale, rescaled to a 10-point score (1-4=low; 5-6=average; 7-10=high). We collected comprehensive demographic, clinical and psychosocial data. Statistical analyses included ANOVA/t-tests and multivariable linear regression to identify predictors of life satisfaction.

Results:

We included 579 PLHBV (median age 31 years; 50.9% male), of whom 180 (31.1%) were taking antiviral therapy. Mean life satisfaction score was 6.43 ± 1.65 , with no significant association with treatment (treated: 6.39 ± 1.70 vs untreated: 6.53 ± 1.53 , $p=0.33$). Treated individuals were more likely to report "excellent living conditions" compared to untreated participants (87.8% vs 79.9%, $p=0.02$). Positive predictors of Life Satisfaction included age >60 ($\beta=1.31$, $p=0.01$), higher education ($\beta=0.36$, $p=0.031$), and employment ($\beta=0.57$, $p=0.03$). Negative predictors were poor mental health ($\beta=-0.93$, $p<0.001$) and physical disability ($\beta=-0.36$, $p=0.01$). In multivariable analyses, treatment was not associated with life satisfaction ($\beta=0.11$, $p=0.49$). Parenthood significantly increased life satisfaction only in treated individuals ($\beta=0.80$, $p=0.04$), while strong social support benefited untreated individuals ($\beta=0.57$, $p=0.01$); poor mental health reduced life satisfaction in both groups ($p<0.05$), and physical disability had greater negative impact among untreated ($\beta=-0.41$, $p=0.02$).

Conclusion:

Senegalese PLHBV demonstrated moderate life satisfaction, primarily influenced by socioeconomic and health status factors. Our findings emphasize the need for integrated biopsychosocial care models as treatment access expands across Africa under new WHO guidelines. Future studies should explore longitudinal quality of life changes with treatment duration.

Study Population

579

Participants

31

Median Age

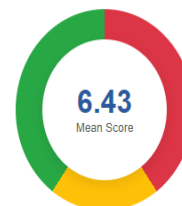
50.9%

Male

31.1%

On Treatment

Life Satisfaction Score



Key Predictors

Positive Predictors

Age >60 : $\beta=1.31$ ($p=0.01$)

Higher Education: $\beta=0.36$ ($p=0.031$)

Employment: $\beta=0.57$ ($p=0.03$)

Negative Predictors

Poor Mental Health: $\beta=-0.93$ ($p<0.001$)

Physical Disability: $\beta=-0.36$ ($p=0.01$)

Note: Antiviral treatment showed no significant association with life satisfaction ($p=0.33$)

Treatment vs Non-Treatment

Treated participants:

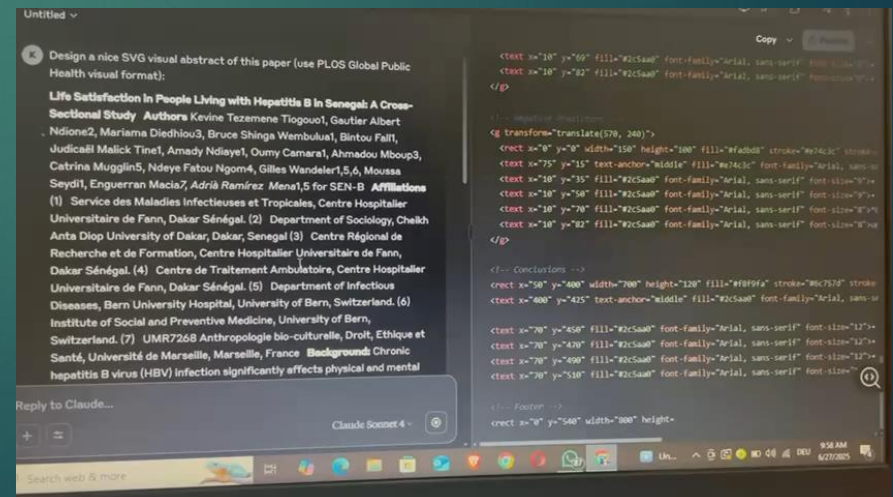
- 87.8% reported "excellent living conditions"
- Parenthood increased satisfaction ($\beta=0.80$, $p=0.04$)

Untreated participants:

- 79.9% reported "excellent living conditions"
- Social support more beneficial ($\beta=0.57$, $p=0.01$)
- Greater impact from physical disability

Solution & Workflow 1/3

- ▶ Prompt Claude Sonnet 4: “Design an HTML visual abstract for this paper...”, pasted the abstract
- ▶ Iterate in chat → trim text, reorder sections.
- ▶ Repeat in new chat for SVG variant.
- ▶ Compare outputs → pick HTML for cleaner layout.
- ▶ Download as HTML.



HTML Visual Abstract Prompts 2/3

Life Satisfaction in People Living with Hepatitis B

A Cross-Sectional Study from Senegal

Objectives

Evaluate life satisfaction in Senegalese PLHBV, identify predictors, and assess treatment impact.

Methods

Cross-sectional study (n=579) using 5-item Life Satisfaction Scale. SEN-B cohort, May 2024-Jan 2025.

Study Overview

579

Participants

31

Median Age

50.9%

Male

31.1%

On Treatment

Life Satisfaction in People Living with Hepatitis B in Senegal: A Cross-Sectional Study

Tiogouo KT, Ndione GA, Diedhiou M, et al. for SEN-B

PLOS Global Public Health • Cross-sectional study • May 2024 • January 2025

Study Population

579

Participants

31

Median Age

50.9%

Male

31.1%

On Treatment

Life Satisfaction Score

6.43

Mean Score

Low (1-4)

Average (5-6)

High (7-10)

Design a nice HTML visual abstract of this paper (use PLOS Global Public Health visual format):

Life Satisfaction in People Living with Hepatitis B in Senegal: A Cross-Sectional Study Authors Kavine Tezemene Tiogouo1, Gautier Albert Ndione2, Mariama Diedhiou3, Bruce Shinga Wembulua1, Bintou Fall1, Judicaël Malick Tine1, Amady Ndiaye1, Oumy Camara1, Ahmadou Mboup3, Catrina Mugglin5, Ndeye Fatou Ngom4, Gilles Wandeler1,5,6, Moussa Seydi1, Enguerran Macia7, Adrià Ramírez Mena1,5 for SEN-B **Affiliations** (1) Service des Maladies Infectieuses et Tropicales, Centre Hospitalier Universitaire de Fann, Dakar Sénégal. (2) Department of Sociology, Cheikh Anta Diop University of Dakar, Dakar, Senegal (3) Centre Régional de Recherche et de Formation, Centre Hospitalier Universitaire de Fann, Dakar Sénégal. (4) Centre de Traitement Ambulatoire, Centre Hospitalier Universitaire de Fann, Dakar Sénégal. (5) Department of Infectious Diseases, Bern University Hospital, University of Bern, Switzerland. (6) Institute of Social and Preventive Medicine, University of Bern, Switzerland. (7) UMR7268 Anthropologie bio-culturelle, Droit, Ethique et Santé, Université de Marseille, Marseille, France **Background:** Chronic hepatitis B virus (HBV) infection significantly affects physical and mental

Key Findings

Age >60: $\beta=1.31$ ($p=0.01$)

Higher Education: $\beta=0.36$ ($p=0.031$)

Employment: $\beta=0.57$ ($p=0.03$)

Poor Mental Health: $\beta=-0.93$ ($p<0.001$)

Physical Disability: $\beta=-0.36$ ($p=0.01$)

Antiviral Treatment: No significant association ($p=0.33$)

Treatment vs Non-Treatment

Treated participants:

- 87.8% reported "excellent living conditions"
- Parenthood increased satisfaction ($\beta=0.80$, $p=0.04$)

Untreated participants:

for the key findings group into positive and negative predictors

HBV Life Satisfaction Visual Abstract

Interactive artifact • Version 2

I have reorganized the key findings section to clearly group the predictors into positive and negative categories. This structure provides better visual hierarchy and makes it easier to understand which factors increase life satisfaction versus those that decrease it.

The positive predictors section highlights the three factors that significantly increase life satisfaction: advanced age, higher education levels, and employment status. The negative predictors section shows the two factors that significantly decrease life satisfaction: poor mental health and physical disability.

The treatment status finding is now presented as a separate note at the bottom, emphasizing that antiviral treatment did not show a significant

Key Predictors

Positive Predictors

Age >60: $\beta=1.31$ ($p=0.01$)

Higher Education: $\beta=0.36$ ($p=0.031$)

Employment: $\beta=0.57$ ($p=0.03$)

Negative Predictors

Poor Mental Health: $\beta=-0.93$ ($p<0.001$)

Physical Disability: $\beta=-0.36$ ($p=0.01$)

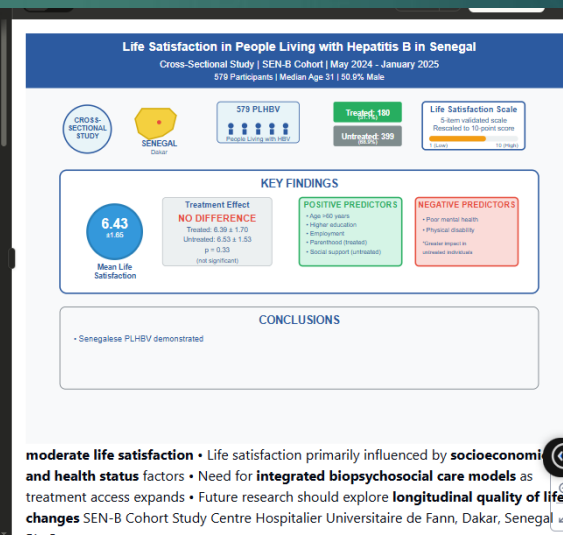
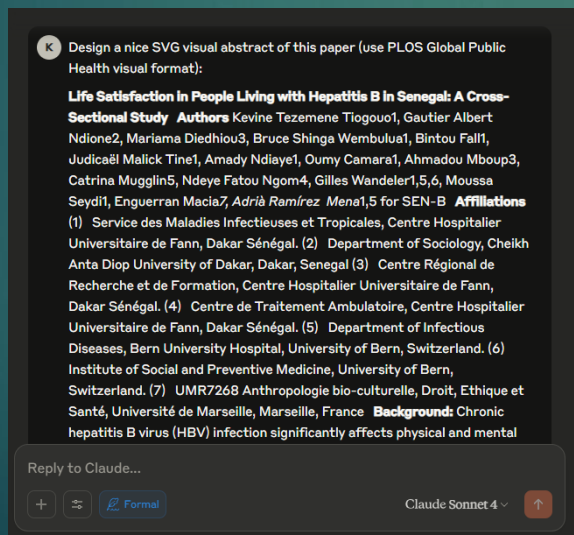
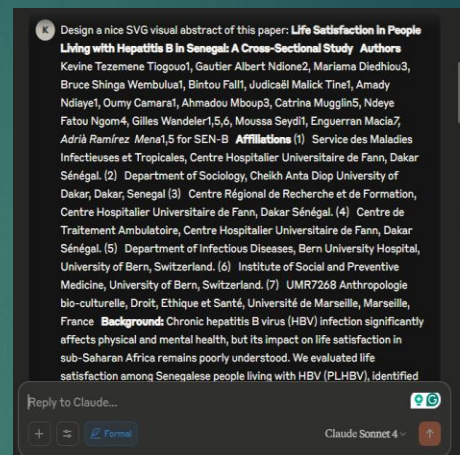
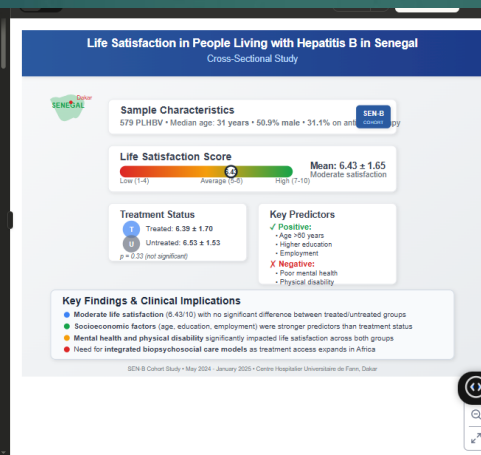
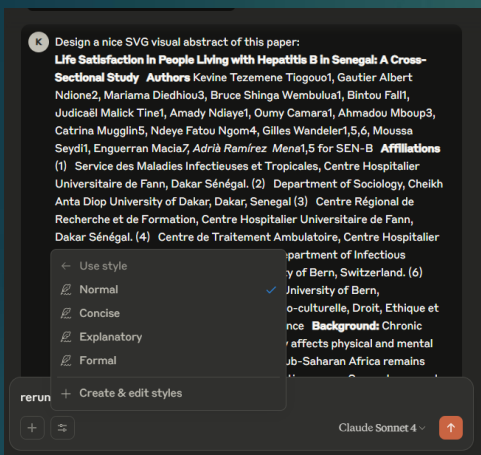
Note: Antiviral treatment showed no significant association with life satisfaction ($p=0.33$)

Treatment vs Non-Treatment

Treated participants:

- 87.8% reported "excellent living conditions"
- Parenthood increased satisfaction ($\beta=0.80$, $p=0.04$)

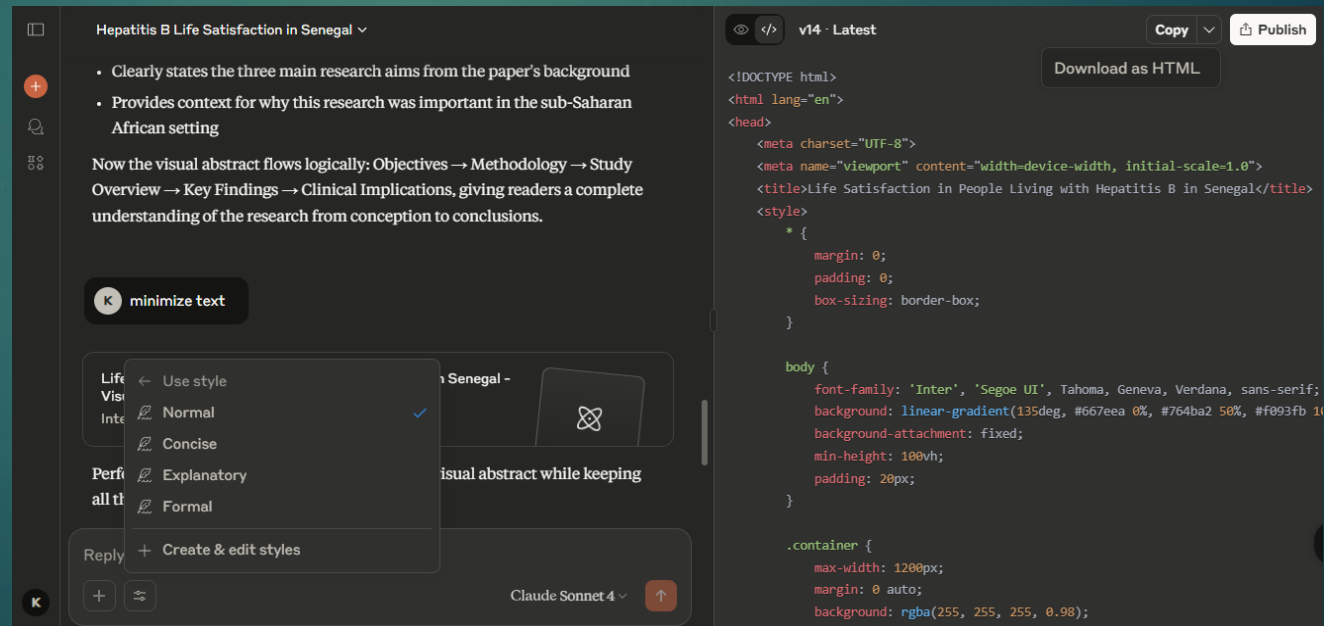
SVG Visual Abstract Prompts 3/3



moderate life satisfaction • Life satisfaction primarily influenced by **socioeconomic and health status** factors • Need for **integrated biopsychosocial care models** as treatment access expands • Future research should explore **longitudinal quality of life changes** SEN-B Cohort Study Centre Hospitalier Universitaire de Fann, Dakar, Senegal

Key AI Features & Tools

- ▶ Claude Sonnet 4 code-block output → valid HTML/SVG instantly.
- ▶ Prompt template enforces grid, colour palette, minimal text.
- ▶ Live browser preview for rapid layout checks.
- ▶ Possible to change styles
- ▶ Download file as HTML, copy code, publish/copy link.
- ▶ Link: <https://claude.ai/public/artifacts/aecdfde2-bceb-4918-8b89-ec238629c32c>



Claude AI Limitations

- ▶ Manual trimming is still required.
- ▶ Needed follow-up prompts for correct section order, layout, and text format
- ▶ SVG layout felt crowded vs HTML version.
- ▶ HTML with Claude normal style, more textual than formal style
- ▶ Not possible to modify code
- ▶ Human QA is still needed for colour contrast & readability.



Opportunities for Improvement

- ▶ Smarter layout & brand styling via style-guide ingestion.
- ▶ Embedded editable code editor for live tweaks without re-prompting.
- ▶ Reduce the cost of paid plans to benefit from more AI features

Reflection & Next Steps

- ▶ Claude AI cuts design time from hours to minutes.
- ▶ Still requires a human eye for aesthetics and clarity.
- ▶ HTML has better visual than SVG
- ▶ Plan: upload my visual abstract to my AI portfolio, showcase my findings on LinkedIn, apply workflow to more abstracts



Thanks for Listening