

Jennings: Internship in Costa Rica!



Exploring Satisfaction Across **Monteverde** **Households**



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The Dataset

2025 Monteverde Community Survey

- From The Monteverde Institute Team

Who the Survey Represents

- The final dataset includes **390 household surveys**, representing **1,114 people**.

The original survey covered areas of community life, including:

- Demographics
- Education
- Health
- Employment and work
- Household economic situation
- Housing and access to services
- Tourism
- **Perceived well-being**



What is “Perceived Well-being?”

Perceived well-being refers to how household heads evaluate different parts of their current quality of life.

The survey includes questions covering these domains:

- Emotional well-being
- Physical/health well-being
- Labor well-being
- Economic Well-being
- Community well-being

Respondents were asked to indicate their level of agreement with statements about their lives using a five-point scale ranging from strongly disagree to strongly agree.

* Note about perception

Original Report Results

The ECM report emphasized two well-being areas:

- **Labor well-being:** stable work, fair pay, fulfillment, and growth
- **Economic well-being:** covering needs, monthly stability, future planning, and financial management

Results were that labor well-being was mostly high, but economic well-being was mostly moderate.

Gráfico 49 Monteverde. Percepción de bienestar laboral¹¹

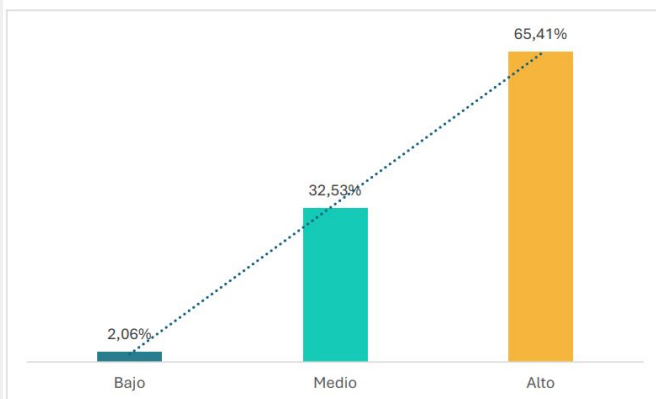
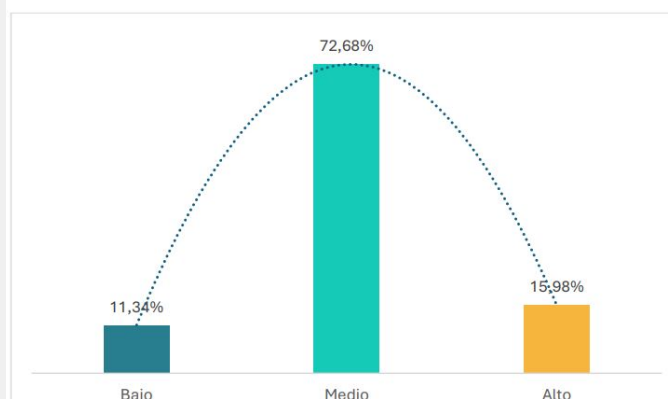


Gráfico 50 Monteverde. Percepción de bienestar económico¹²



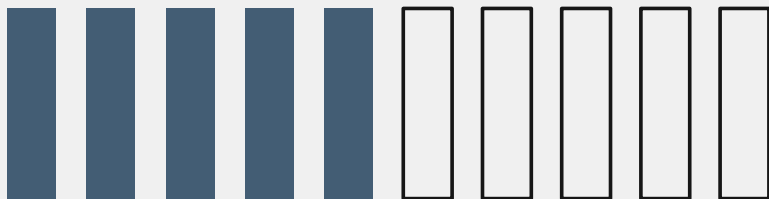
Research Question:

How are housing, financial pressure, and educational interruption associated with perceived Well-being in Monteverde households?



My Analysis

Emotional + Physical/Health + Economic + Community



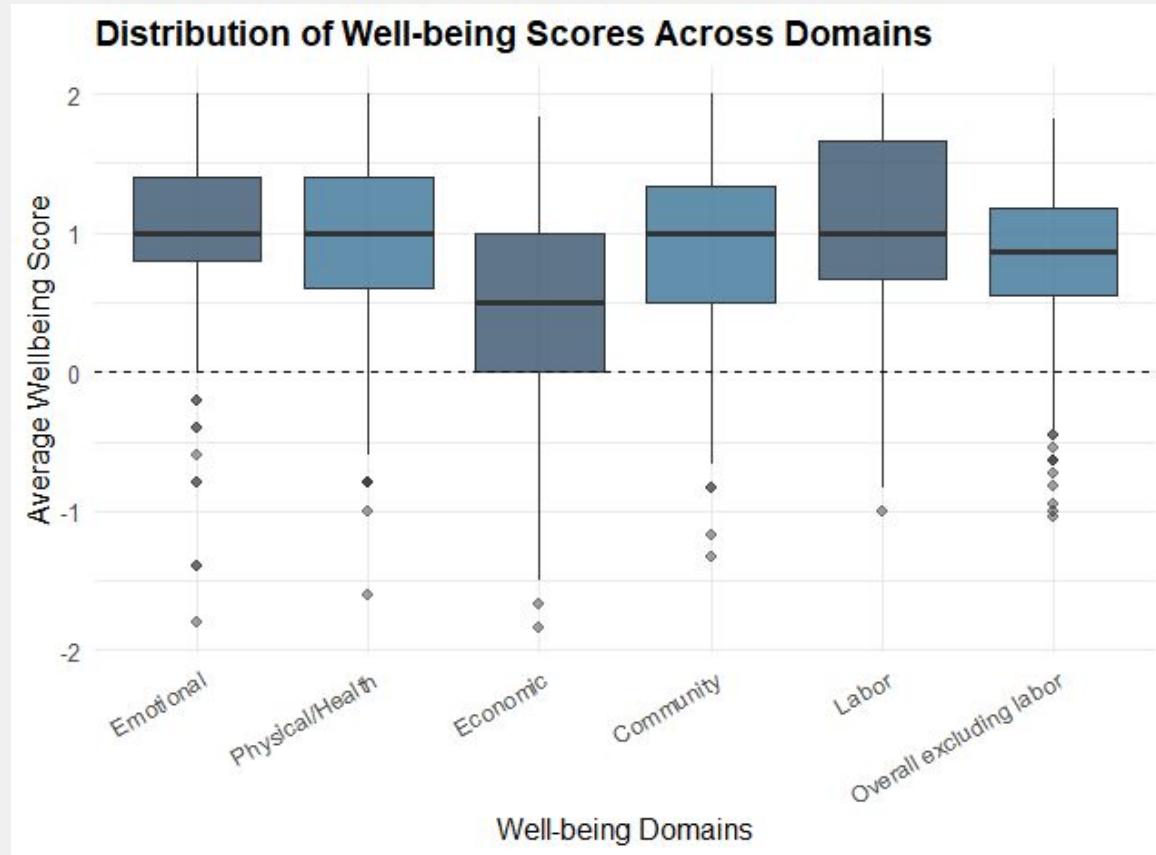
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**Overall Perceived
Well-Being Score**

*Note: Labor is excluded because the questions do not apply equally to every household. 25.4% missing responses.

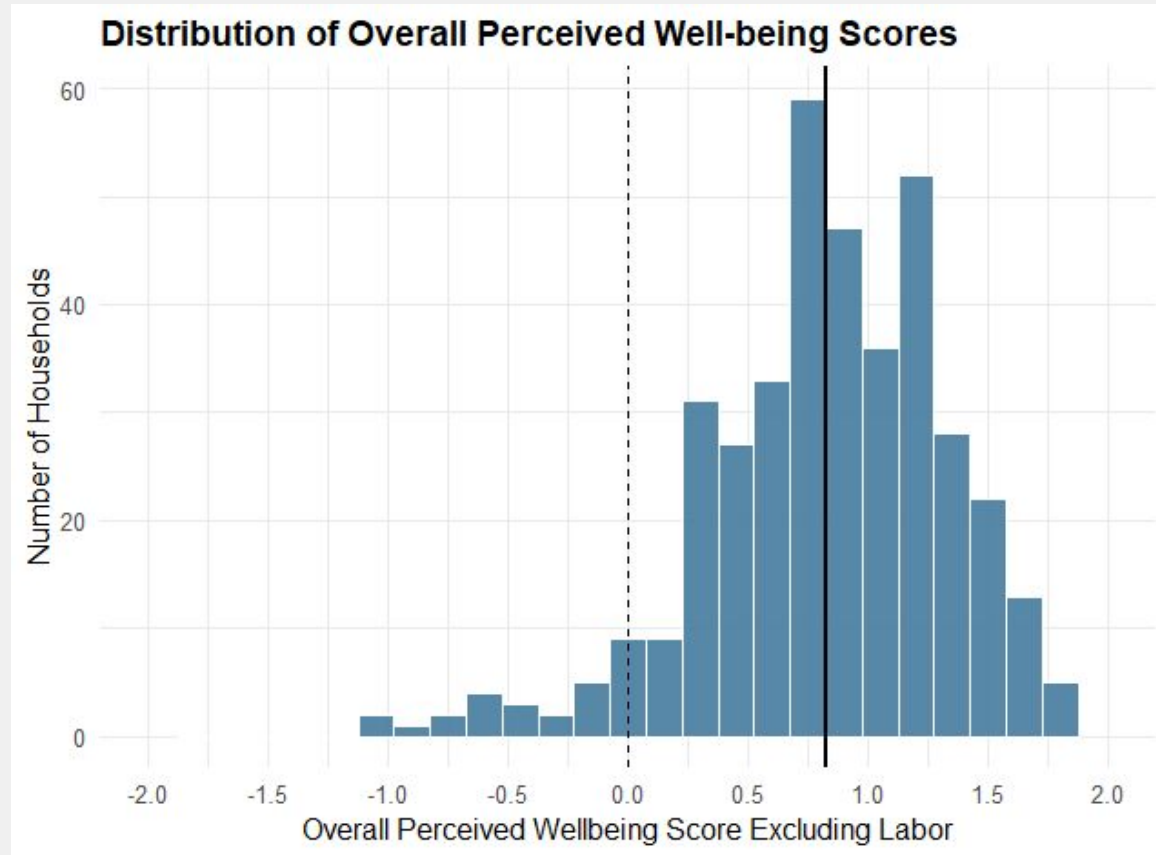
This overall score is later used to examine whether perceived Well-being differed across certain household indicators.

Figure 1:



Scores range from -2 to 2 values above 0 indicate more positive perceived well-being.

Figure 2:



Dashed line marks neutral well-being solid line marks the sample mean

Housing & Economic:

- Renter status
- High fixed-expense burden
- Household debt

How much higher or lower is the average well-being score for each household condition?

*Note: These indicators are separate from the well-being domains, they come from different sections of the survey.

Education-related:

- Interruption of education
- Highest education level
- Second language use

Household Indicators Used

Figure 3:

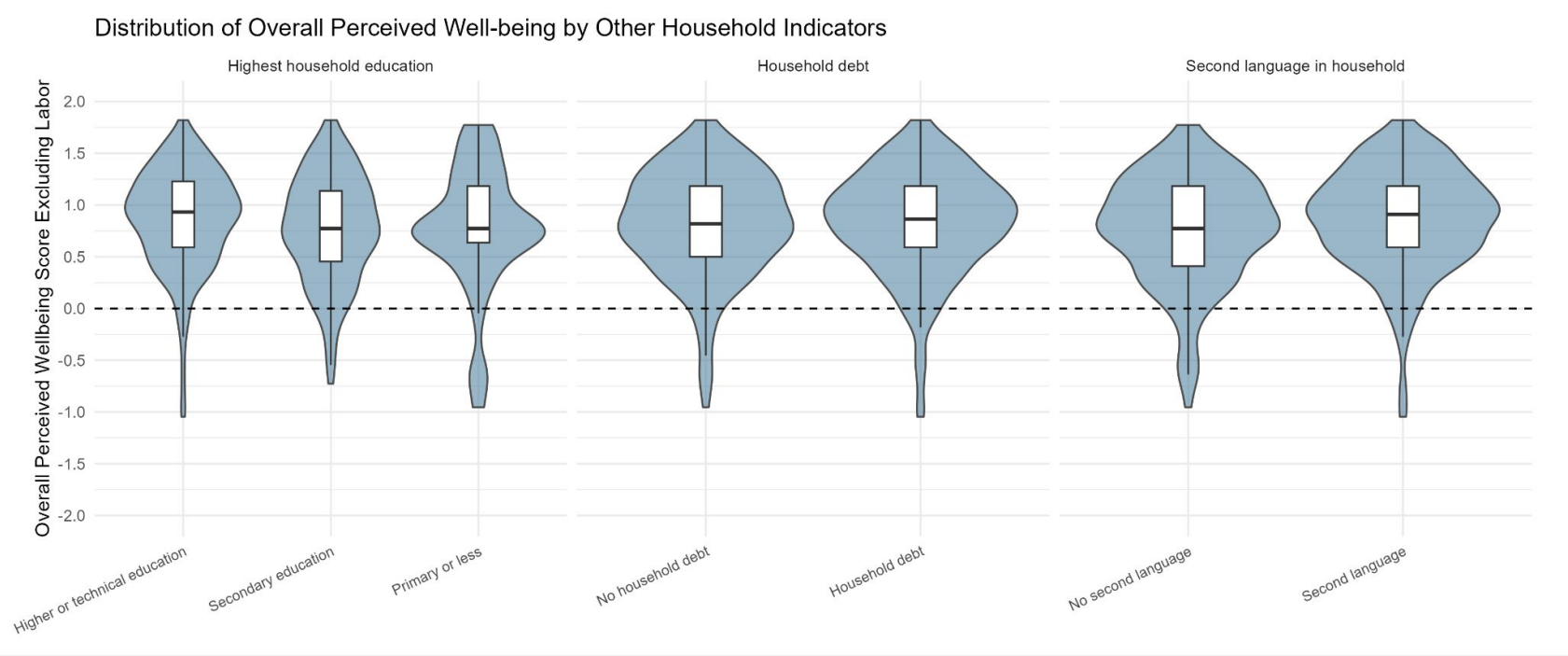


Figure 4:



Linear Regression Model

```
lm(formula = overall_well-being_no_labor ~ renter + high_fixed_expense + has_debt +  
household_dropout + speaks_second_language + education_group, data = well-being.full)
```

Residuals:

Min	1Q	Median	3Q	Max
-2.04832	-0.26411	0.02684	0.36077	1.05231

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	0.97664	0.08032	12.160	< 2e-16 ***
<u>Renter</u>	<u>-0.12765</u>	0.05732	-2.227	<u>0.02655</u> *
<u>High_fixed_expense</u>	<u>-0.14227</u>	0.05640	-2.522	<u>0.01207</u> *
Debt	-0.02568	0.05474	-0.469	0.63919
<u>Education_interruption</u>	<u>-0.15962</u>	0.05504	-2.900	<u>0.00395</u> **
Speaks second language	0.05191	0.06281	0.826	0.40908
Education Secondary education	-0.01148	0.06315	-0.182	0.85584
Education Primary or less	-0.01496	0.10298	-0.145	0.88461

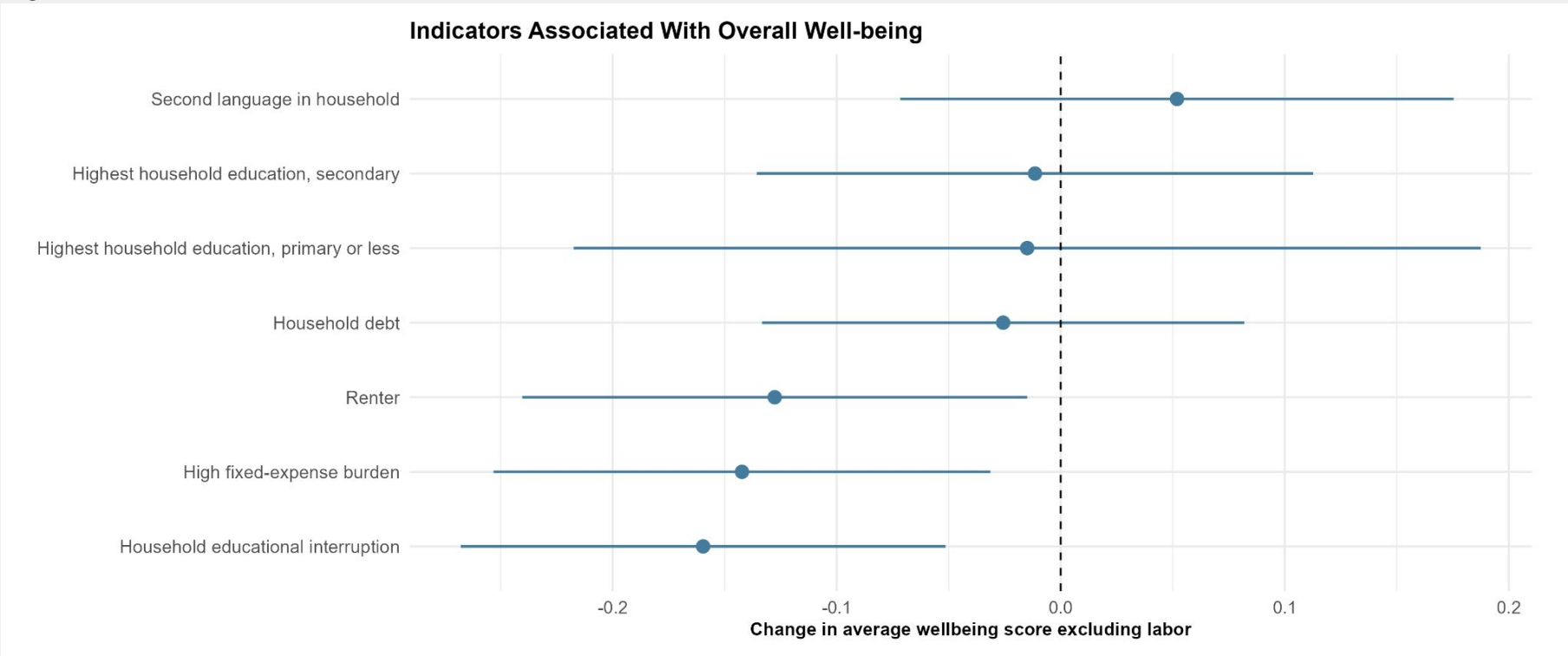
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.5013 on 373 degrees of freedom

Multiple R-squared: 0.0613, Adjusted R-squared: 0.04369

F-statistic: 3.48 on 7 and 373 DF, p-value: 0.001258

Figure 5:



Left of 0 means lower well-being right of 0 means higher well-being.

Does this household condition change the odds of being in a higher well-being category?

- Because the original well-being questions were ordered survey responses, I also tested the results using an ordinal model.

For this model, I grouped the overall perceived well-being score into ordered categories:

- Low or negative well-being
- Moderate well-being
- High well-being

The model estimates whether each household indicator is related to the odds of being in a higher well-being category.

This check is useful because it does not treat well-being only as a continuous score. With this I am able to ask whether the same household pressures are related to moving into a higher or lower well-being category.

Ordinal Model Check!

Call:

```
polr(formula = well-being_level ~ renter + high_fixed_expense +  
      has_debt + household_dropout + speaks_second_language + education_group,  
      data = ordinal_data, Hess = TRUE)
```

Coefficients:

	Value	Std. Error	t value	Pr(> t)
Renter	-0.34853	0.2299	-1.5161	0.129504848
High_fixed_expense	-0.41292	0.2264	-1.8237	0.068200376 .
Debt	-0.02250	0.2168	-0.1038	0.917326310
<u>Education interruption</u>	<u>-0.59979</u>	<u>0.2197</u>	<u>-2.7297</u>	<u>0.006339646</u> **
speaks_second_language	-0.12211	0.2541	-0.4806	0.630834252
education_groupSecondary education	-0.09792	0.2530	-0.3871	0.698715474
education_groupPrimary or less	-0.43076	0.4162	-1.0351	0.300632977

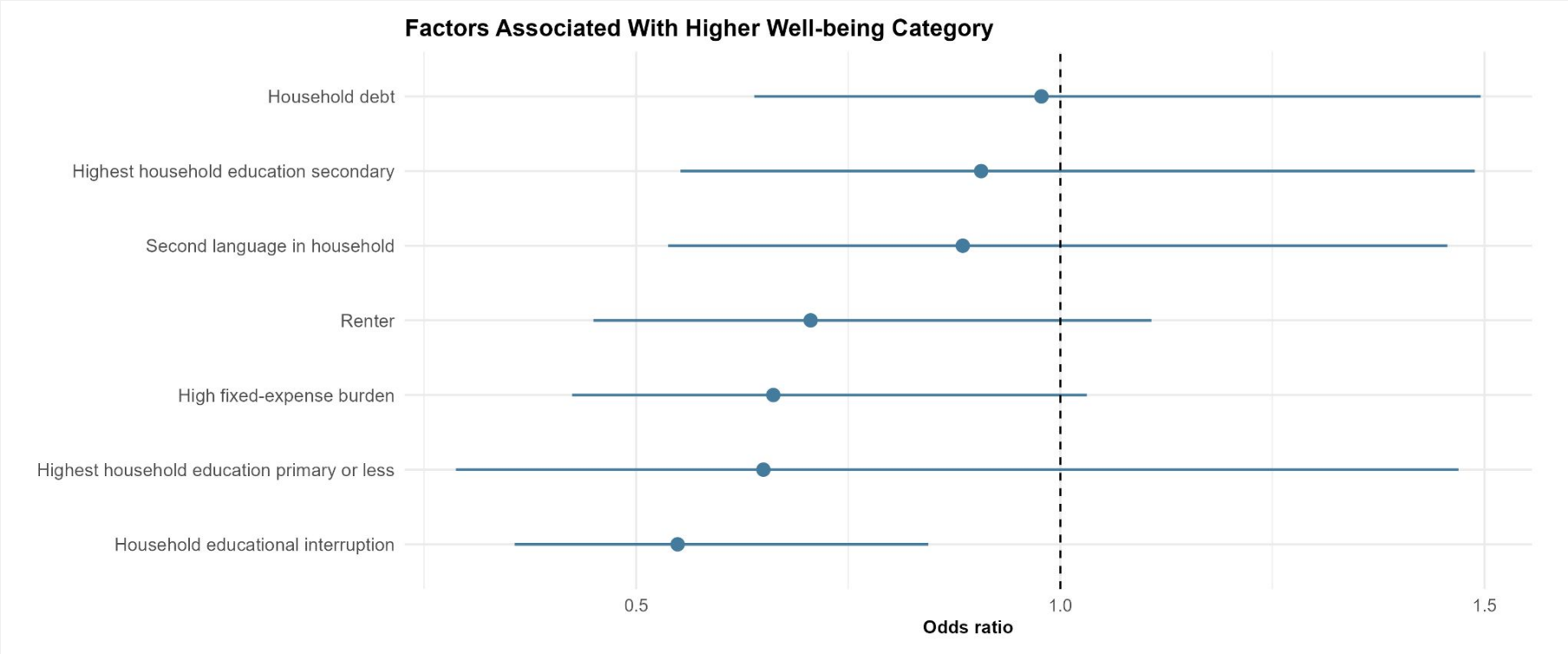
Intercepts:

	Value	Std. Error	t value
Low or negative well-being Moderate well-being	-3.5498	0.3932	-9.0289
Moderate well-being High well-being	-0.2739	0.3216	-0.8518

Residual Deviance: 642.6435

AIC: 660.6435

Figure 6:



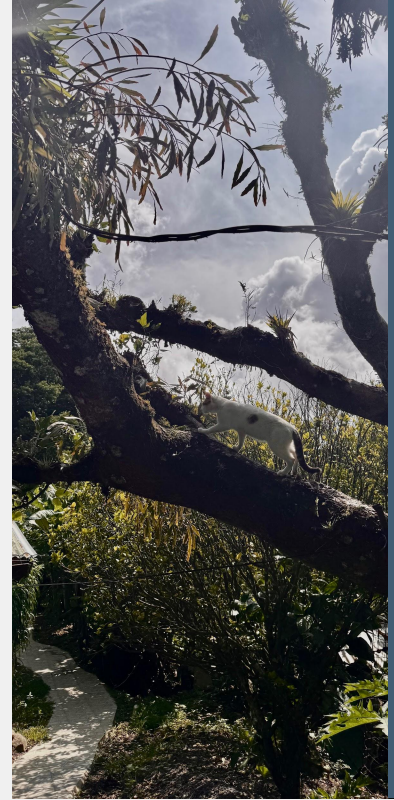
Ordinal logistic regression odds ratios values below 1 indicate lower odds of higher well-being

Limitations

This analysis is exploratory and does not prove causation.

- The survey is household-based
- Overall well-being score is based on perceived well-being
- Linear vs. Ordinal
- Labor exclusion

The findings should be read as exploratory patterns, with household educational interruption emerging as the most consistent result.



Findings Across Models

01 Linear Model

- Renter status
- High fixed-expense burden
- Household educational interruption

Associated with lower average perceived well-being.

02 Ordinal Model

- Household educational interruption

Less likely to report high well-being compared with households without educational interruption.

Renter status and high fixed-expense burden still pointed in a negative direction in the ordinal model, but they were not statistically significant.



This analysis can help guide

- Future research
- Community outreach
- Local decision-making
 - Creating programs that respond to education, housing, and cost-of-living concerns.

Why This Matters



Carnegie
Mellon
University

Thank
you!