

# ANALYSIS OF THE EFFECTS OF CKDnt on HOUSEHOLD INCOME AND EARNINGS

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**Objective:** To study the socioeconomic outcomes associated with CKDnt in four communities in Chichigalpa, Nicaragua that are home to a substantial number of sugarcane workers.

## Methods:

### Design:

- **Cluster-Based Systematic Sample**
  - GIS Mapping Exercise to identify households in 4 communities
    - Guanacastal, Manhatan, El Gheto, Candelaria
  - 1,851 Eligible Households Identified
- 500+ Households Represented
  - Oversampling from worker-heavy communities
- Standardized practices to ensure primary wage-earners had opportunity to represent households.

### Data Collection:

- **Questionnaire**
  - Administered to Heads of Household
  - 23 Modules, 6 topics
    - Family Information, Demographics, Income, Employment, CKDnt, Resilience

### Key Outcomes Analyzed:

- Earnings and expenditures over time (non-employment earnings)
- Employment History
- Experience with CKDnt
- Marital Status on Household Heads

## Results and Discussion:

Key demographic, income, earnings, employment, and widowhood findings, by CKDnt status			
CDKnt Status	Non-CKDnt Households (n = 417)	CKDnt Households (n = 189)	Significant difference from Non-CKDnt
<b>Demographics</b>			
	Mean (SD)	Mean (SD)	
Head of household age (years)	44 (17.2)	46 (15.2)	ns
<b>Female head of household</b>	<b>40% (49%)</b>	<b>14% (35%)</b>	<b>***</b>
Own home	86% (35%)	89% (31%)	ns
Have two or more rooms just for sleeping	59% (49%)	59% (49%)	ns
<b>Head of household unemployed</b>	<b>53% (50%)</b>	<b>86% (36%)</b>	<b>***</b>
<b>Income (in Nicaraguan Cordobas [C\$])</b>			
Total annual income	73,615 (72,279)	74,688 (60,325)	ns
<b>Average annual employment earnings</b>	<b>52,835 (61,380)</b>	<b>23,501 (40,081)</b>	<b>***</b>
<b>Average annual income from other sources</b>	<b>9,963 (27,906)</b>	<b>6,246 (14,765)</b>	<b>***</b>
<b>Average annual INSS payment</b>	<b>11,700 (26,797)</b>	<b>46,080 (50,816)</b>	<b>***</b>
<b>Monthly expenditures (in C\$)</b>			
Education	826	665	ns
<b>Medicine</b>	<b>391</b>	<b>540</b>	<b>**</b>
<b>Characteristics of Widowed households (13% of total) at follow-up</b>			
	Due to causes other than CKDnt (n=17)	Due to CKDnt (n=62)	
Percentage makeup of widowhood cause	19%	81%	
<b>Average age of widowed head of household, in years</b>	<b>71</b>	<b>58</b>	<b>***</b>
Annual household income	C\$90,413	C\$57,959	ns

### Findings:

- One third of households indicated a CKDnt or CKD diagnosis indicating high prevalence of disease across communities engaged in agricultural labor.
- 86% of CKD affected households indicated that the head had been unemployed for 6 months or longer.
- Households unaffected by CKD earned double that of CKD-affected households from employment earnings.
- Total income for CKD households slightly higher than non-CKD larger due to higher non-employment earnings (social security payments).
- Households head by widows or widowers due to CKDnt demonstrate deficits in total income.

### Discussion:

- Households exhibited similarities on demographic characteristics and resource availability, indicating an effective sampling design.
- CKDnt-affected households supplement income from state-funded services, indicating a substantial public burden.
- CKDnt-affected households spend more on medicine and less on education than comparison households.
- The number of households headed by widows in the communities is 11 percentage points higher than the national average of 5.5%, exacerbating negative economic effects at the household level.



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