

July 2004

## An analysis of occupational hazards for agricultural workers in the Monteverde Zone [PowerPoint]

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### Recommended Citation

Antony, Ashley; Moore, Meredith; Pinar, Tonguc; and Youngblood, Elizabeth, "An analysis of occupational hazards for agricultural workers in the Monteverde Zone [PowerPoint]" (2004). *Community Health Collection (Monteverde Institute)*. 49.

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# An Analysis of Occupational Hazards for Agricultural Workers in the Monteverde Zone

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**Meredith Moore**, University of South Florida

**Tonguc Pinar**, Harvard Medical School

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# Our Goals:

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- To determine general demographic information of participants
- To collect an illness/injury recall, an occupational history, and a basic migration history for a two-year period
- To record a typical 24-hour workday period
- To share a descriptive summary with the community at large and MVI
- To discuss our research with the community and receive input for future research topics

# Methods: Who?

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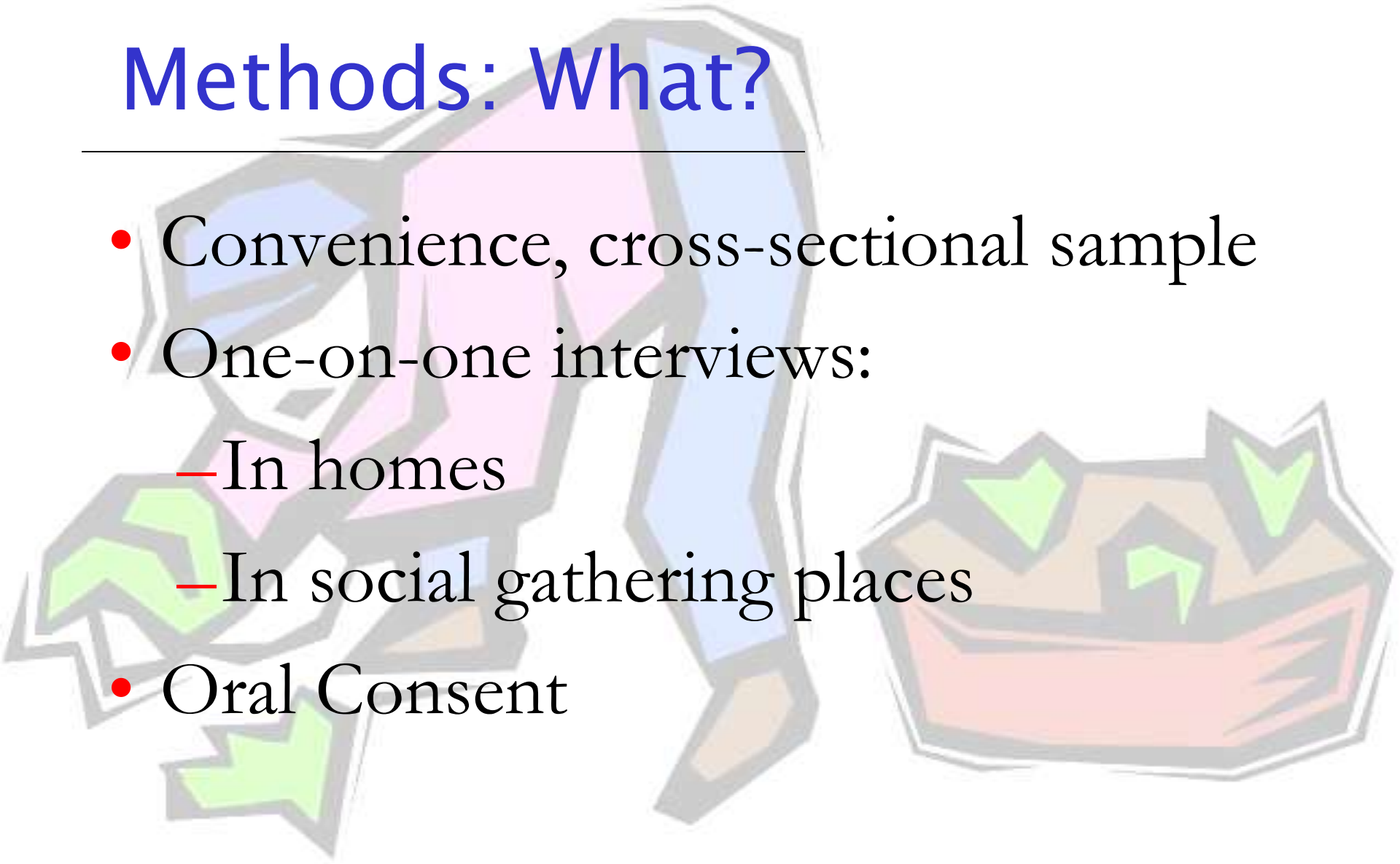


11 Native and Non-native Male Hired Agricultural Workers

# Methods: What?

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- Convenience, cross-sectional sample
- One-on-one interviews:
  - In homes
  - In social gathering places
- Oral Consent



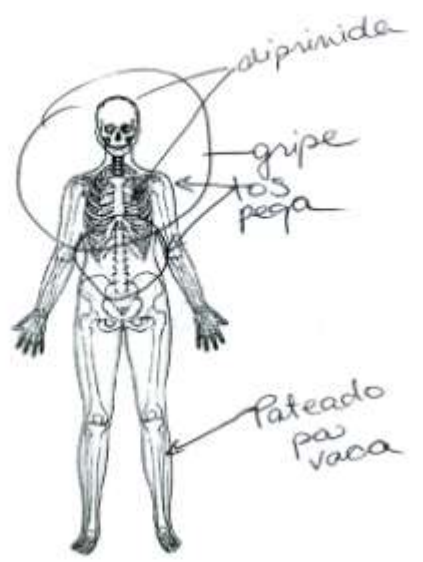
# Methods: Icon Calendar





# Methods: Recall

Participant Code:




















Illness/Injury Code	Description of Injury	Time/Date/Duration	Time off Work	Medical Attention
10-1	Diprinda	Oct - mar	Nunca	No
10-2	Gripe	8 dias	3 dias	No, pastillas de Vitosi
10-3	Pateado por vaca	3 dias de noche	<del>3 dias</del> nunca	No - sin infeccion
10-4	Tos Pega	una semana	nunca	-fui a curandera para un raje de coctos



# Methods: Daily Schedule

Participant Code:

Time	Social Activity	Work Activity	Time	Social Activity	Work Activity
03:00 am			03:00 pm		
04:00 am			04:00 pm		 <i>Shoos</i>
05:00 am			05:00 pm		
06:00 am			06:00 pm		
07:00 am		 <i>Shoos</i>	07:00 pm		<i>fumar 1</i>
08:00 am			08:00 pm		<i>banas</i>
09:00 am		<i>Chapas</i>	09:00 pm		<i>9:30</i>
10:00 am			10:00 pm		
11:00 pm		<i>deu Comida</i>	11:00 am		
12:00 pm			12:00 am		
01:00 pm			01:00 am		
02:00 pm			02:00 am		

*fumar*

# Methods: Questionnaire

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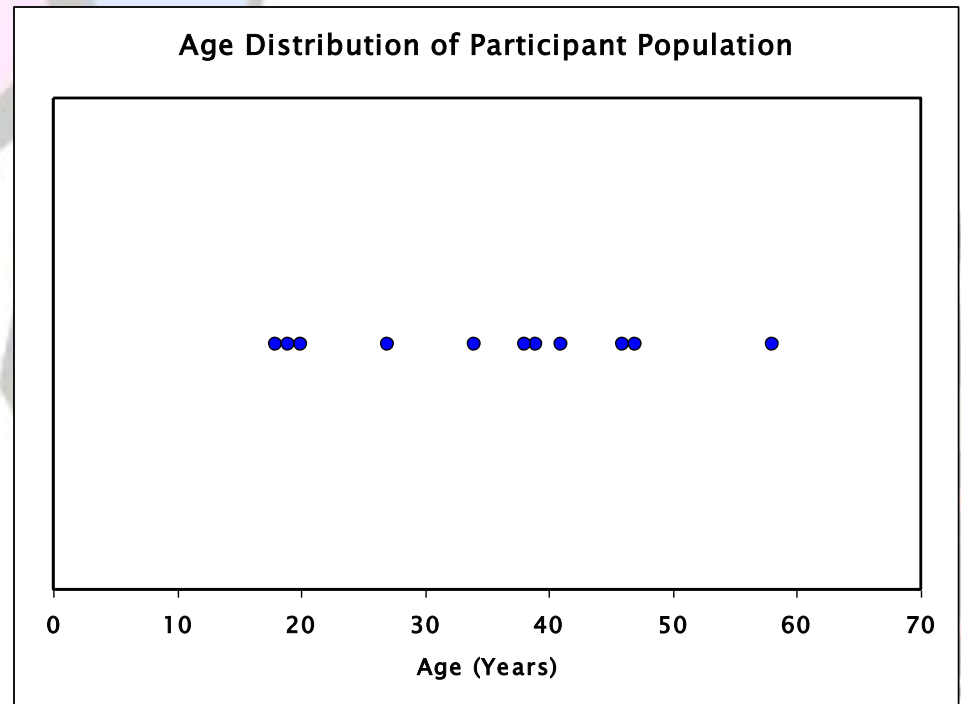
- Based on the Rapid Assessment Protocol
- Collected information on:
  - Basic demographics
  - Job Training
  - Compensation
  - Work Hazards



# Results: Demographics

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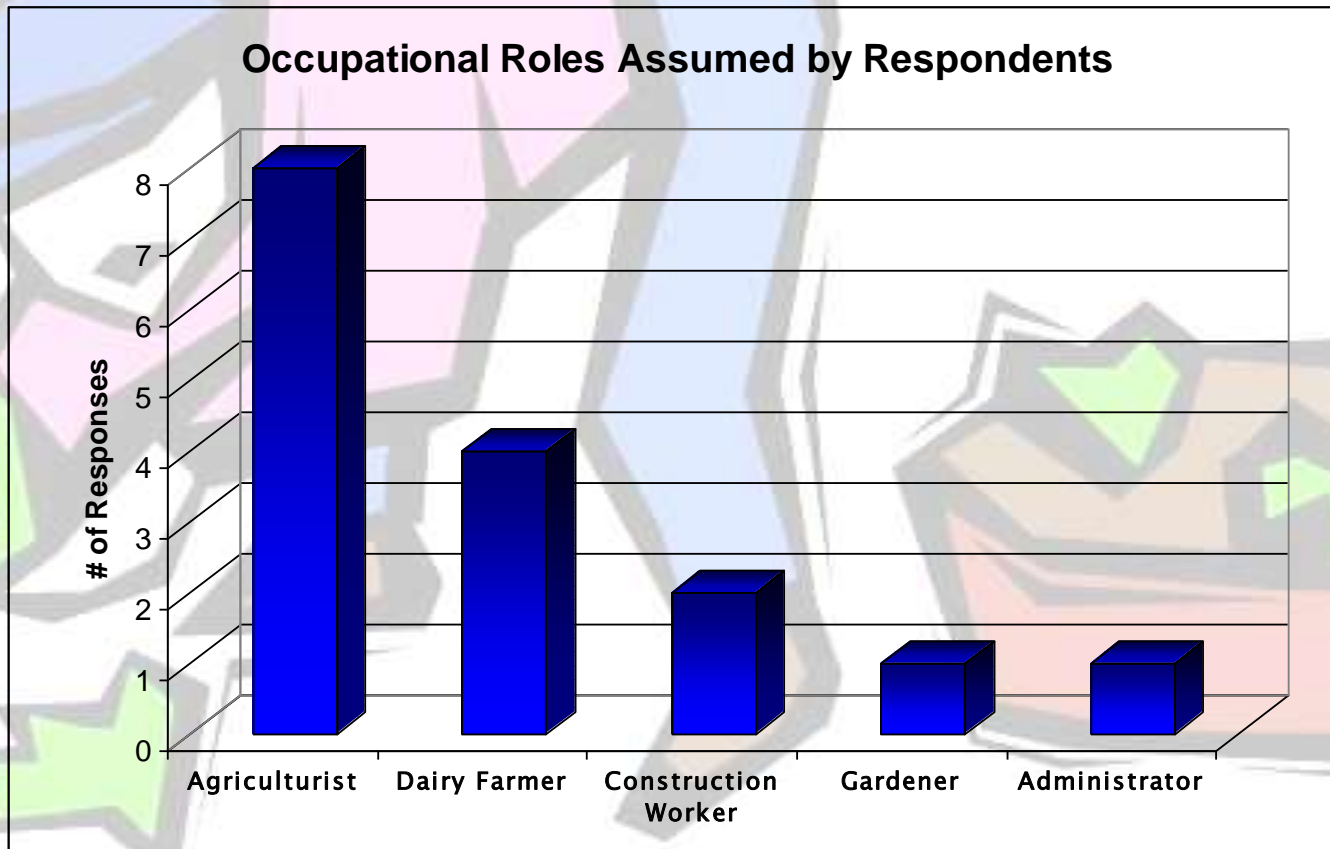
- 11 participants
- All male
- Over 18 years of age
- Average age: 35.2



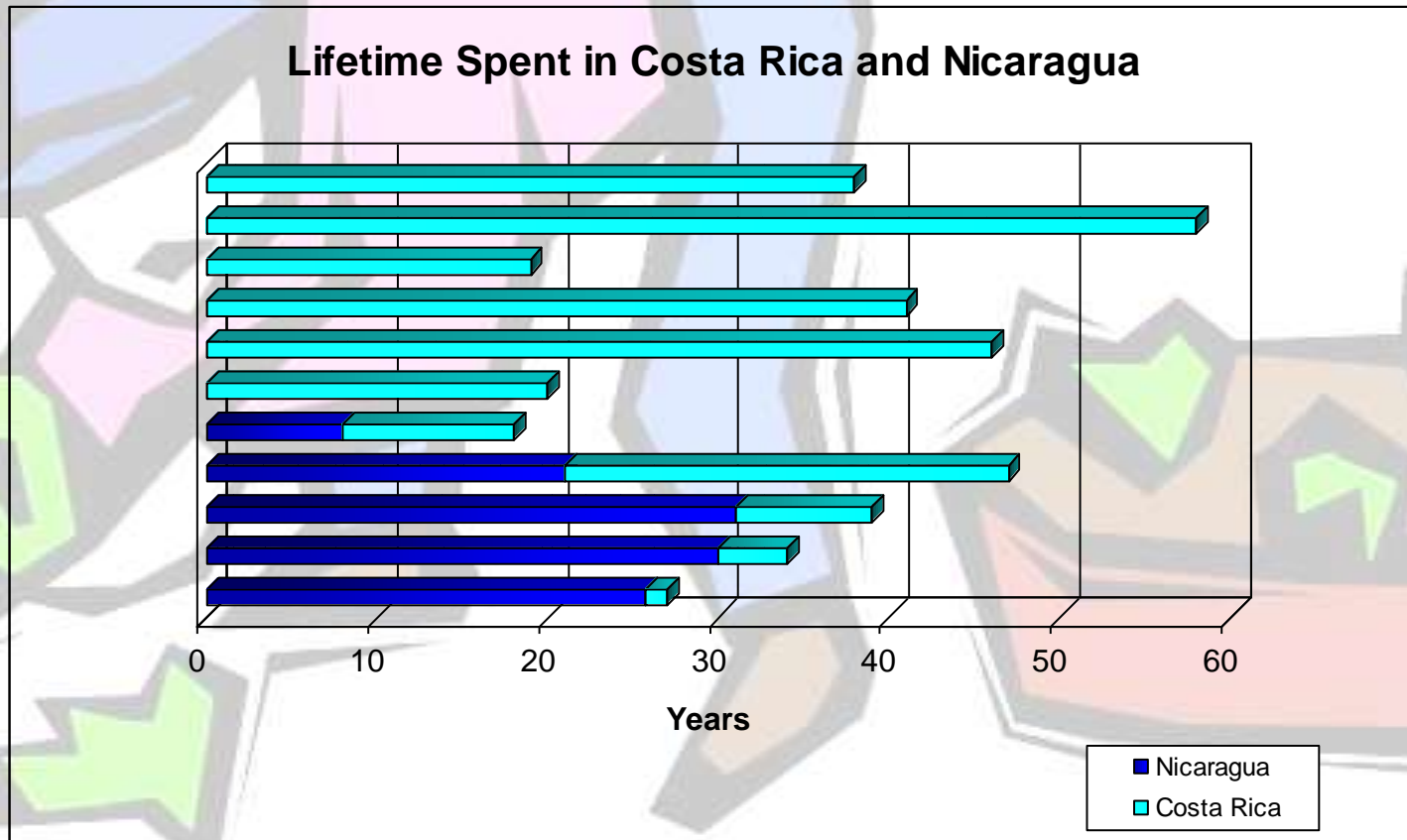


# Results: Demographics

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# Results: Demographics



# Results: Demographics

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- 3 single, 8 married or with partner
- Average of 1.9 children, mode = 1
- 9 participants have children
  - Of those, 7 live with all of their children
- Average classroom education: 4.4 yrs.



# Results: Icon Calendar

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- 10 injuries/illnesses reported in the same month as major life or job event
- 8 job events reported in the same month as a major life event
- Due to:
  - Success of icon calendar as memory anchor?
  - False recall?

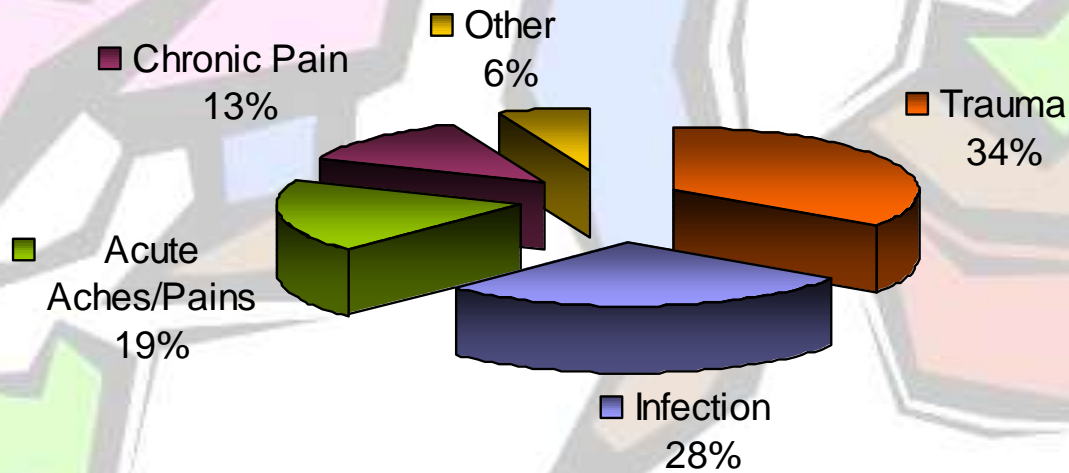
# Results: Icon Calendar

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- 20 of 27 injuries/illnesses were recorded between March and September
  - Months encompassing the rainy season
- 7 accounts of *gripe* between June and September
  - Possible correlation with the rainy season
- A combined total of 72 days of symptoms
- **Caveat:**
  - We are currently in the rainy season
  - Rainy season could be more memorable

# Results: Icon Calendar

Types of Injuries Recalled for a Two-Year Period





# Results: Job Training

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- 10 of 11 participants received training
- 9 reported on-site training, typically by father
- 2 received formal occupational training in courses or workshops
  - Both were native Costa Ricans

# Results: Compensation

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- Average work week: 57 hours
- Most often, paid every 15 days
- 9 of 11 are paid in cash, by the hour
- 7 of 11 receive time off for vacation
- 9 of 11 have enough time to socialize

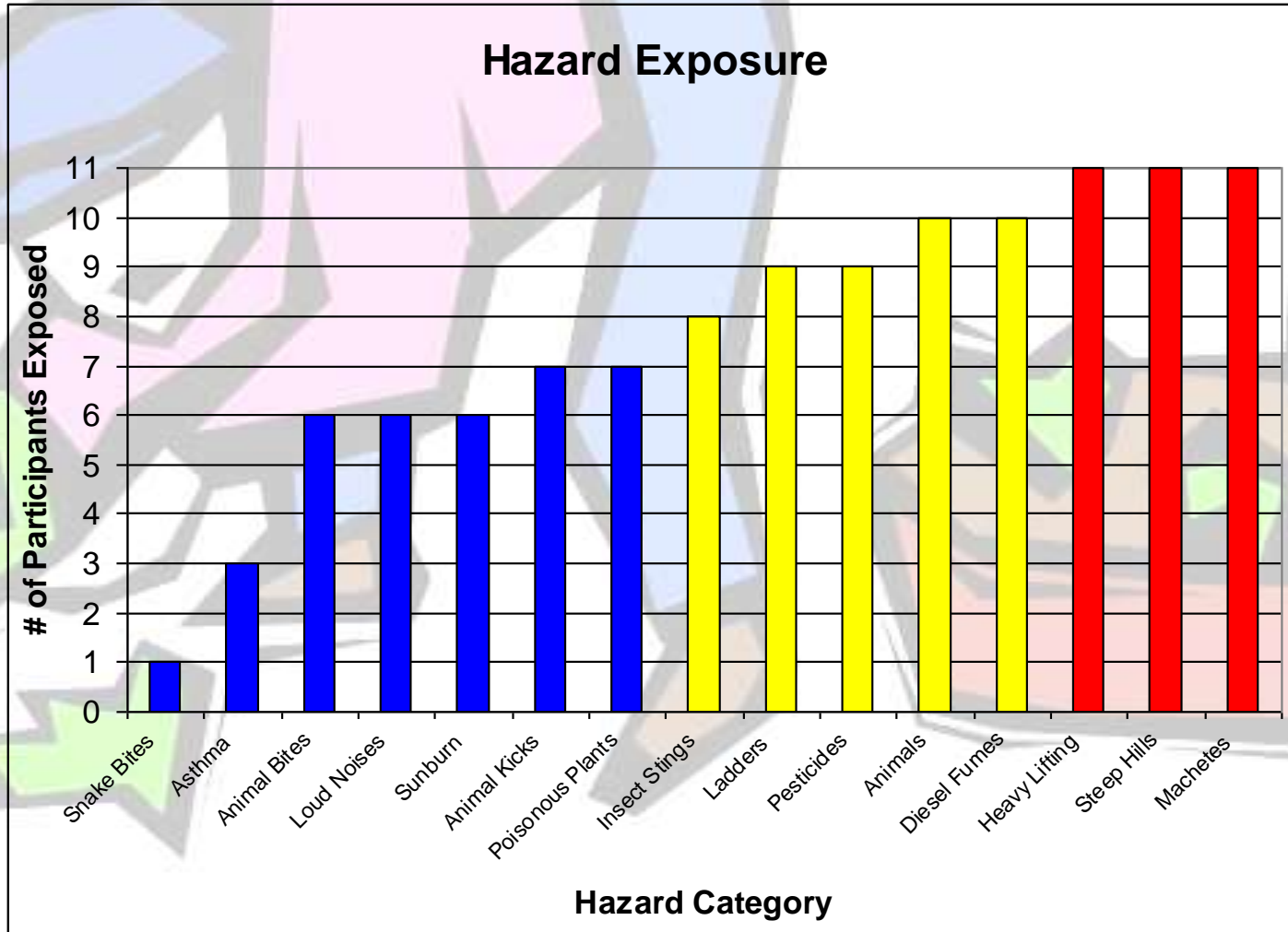
# Results: Hazards

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- Goal: prioritize hazards based on 4 categories:
  - No. of participants exposed
  - No. of mentions
  - No. of illnesses/injuries caused to participants
  - Severity of health risk



# Results: Hazards





# Results: Hazards

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- Most often mentioned as concern for participants:
  - Animals, Pesticides, Heavy Lifting
- Reportedly caused the most illnesses/injuries in recall
  - Heavy Lifting, Pesticides, Machete, Animals
- Most serious health risks:
  - Pesticides, Machete, Heavy Lifting, Snake Bite, Animals

# Results: Hazards

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- Community members generally agreed with our consensus list: (in order)
  - Pesticides
  - Machete
  - Heavy Lifting
  - Animals
- Future targeting for:
  - Research
  - Education
  - Intervention

# Benefits: Instrument

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- Previously tested in Costa Rica
- Icons were sensitive to limited literacy of our target population
- Non-threatening
- Allowed for a more comprehensive look at the multifaceted realities faced by agricultural workers

# Risks to Participants:

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- Psychological discomfort
- Unwanted attention to marginalized members of society
- Heightened awareness of hazards without immediate solutions or PPE's provided



# Limitations: Access

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- Difficulty accessing target group
  - Relatively few workers (crop schedule)
  - Discrimination
- Inability to secure absolute privacy
  - Researchers felt participants may have been afraid information would reach their employers and other community members

# Limitations: Instrument

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- Excessive length and physical involvement needed for instrument
- Limited knowledge for question development
- Potential inconsistency
  - Calendar requires practice

# Recommendations:

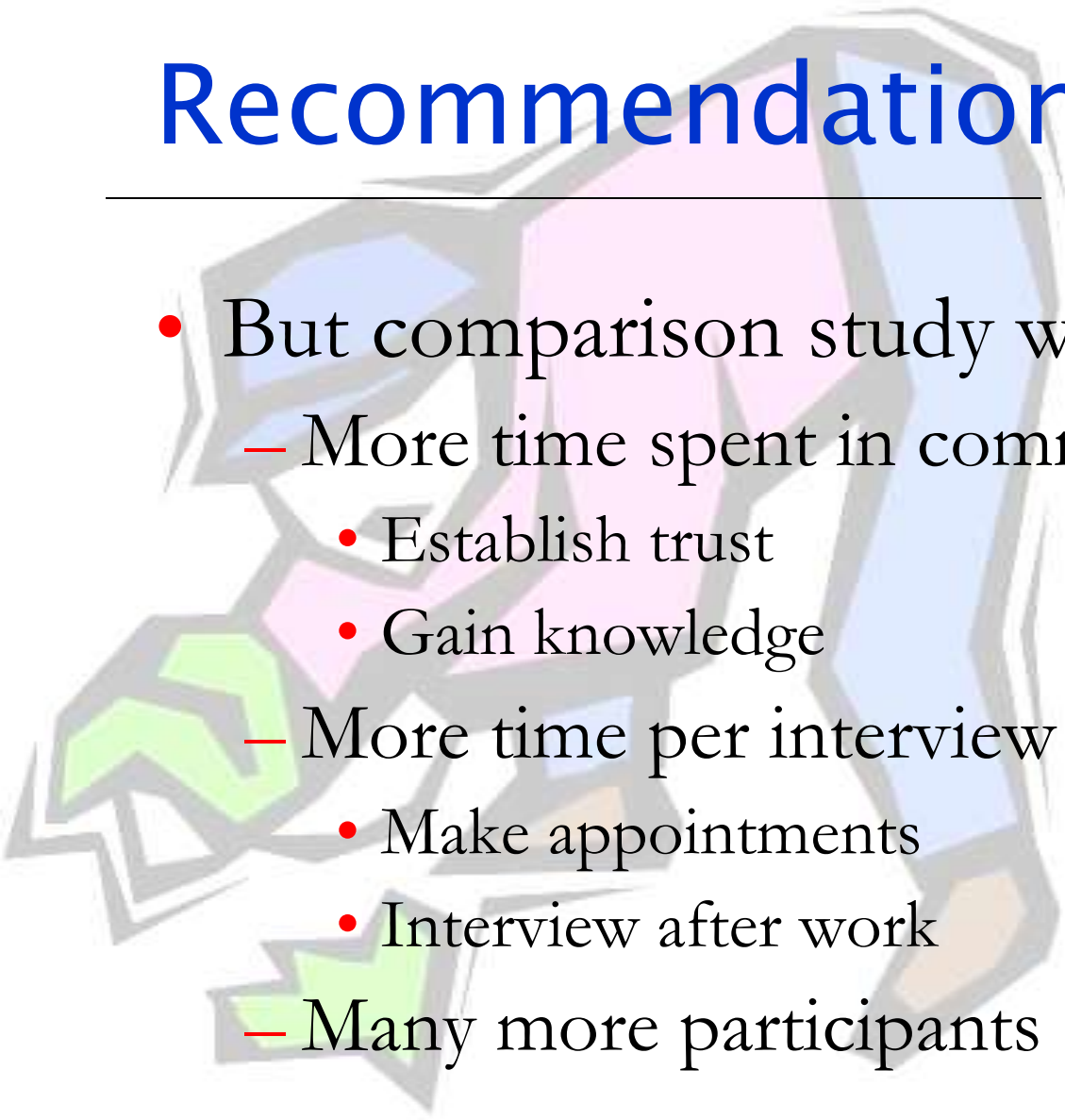
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- Combine interviews with observation
- A comparison study between the Nicaraguan and Costa Rican agricultural workers
  - Exposure to hazards
  - Compensation
  - Education / Job Training

# Recommendations:

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- But comparison study would require:
  - More time spent in community
    - Establish trust
    - Gain knowledge
  - More time per interview
    - Make appointments
    - Interview after work
  - Many more participants (for stats)





# Acknowledgements:

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- **We would like to thank the following individuals and organizations:**
- Elsa Batres Boni, Yamileth Jimenez, Martìn Noghui, Dr. Linda Forst, Dr. Anne Krantz, Dr. Lynn Morgan, Dr. Susan Scrimshaw, Dr. Nadine Peacock, Dr. David Himmelgreen, and Dr. Nancy Romero-Daza.
- Our participants
- The Monteverde Institute, and especially Humberto Brenes

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