



Herding, playing, and learning: daily activities of Samburu pastoralist kids



Jackson Plemmons¹, Charles E. Hilton¹, and Bilinda Straight²

¹Department of Anthropology, Univ. of North Carolina at Chapel Hill, ²Institute of the Environment & Sustainability, Western Michigan Univ.

Background and Objectives

- Kids' labor characterizes many small-scale Kenyan pastoralist societies. For Samburu pastoralists, adults task immature individuals (~3-14 years of age) daily to perform a variety of economic activities for their respective households and settlements (Fratkin, 1989; Straight, 1997). But, the range of kids activities and task assignments are understudied.
- Activities range in scope, and for developing kids, tasks become increasingly difficult as they age.
- Frequent economic tasks include:
 - allocare of younger sibling(s);
 - obtaining water and firewood for the household;
 - leading livestock to water & fodder; milking animals;
 - making fodder accessible for small livestock [goats & sheep].
- **OBJECTIVES:**
 - Document range of activities performed by Samburu kids
 - Examine differences in activity times by age and sex
 - Investigate differences in exertion levels by activity (heart rate) and by age/sex

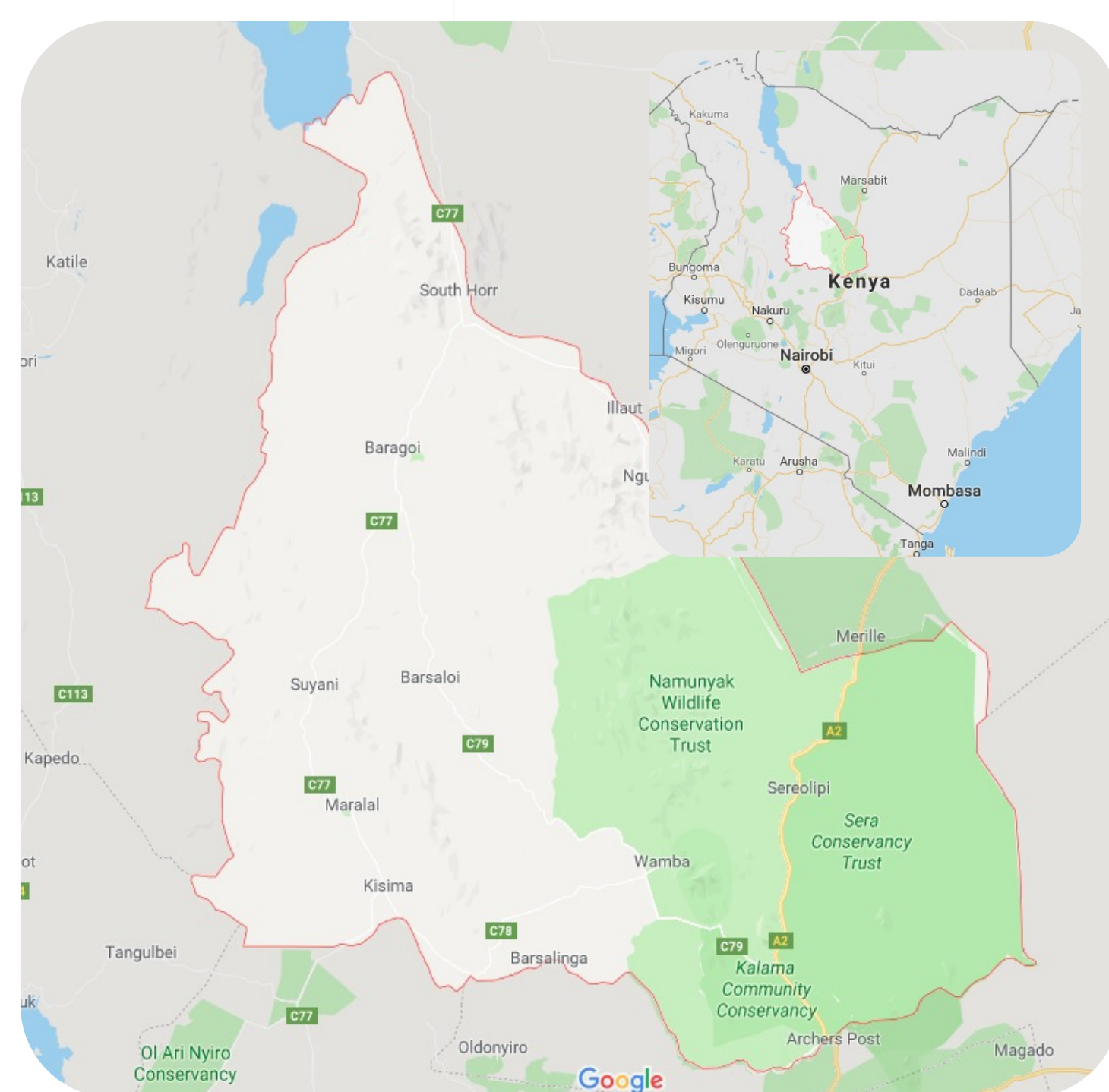


Figure 1. Map of Samburu County. Focal-follows occurred in Highland settlements near Kisima and in Lowland settlements near Wamba.

Materials and Methods

- Participants are drawn from a larger NSF project (Straight, PI; see Table 1) with informed consent given by both kids and their parents.
- Observations occurred at both Samburu Highland (near Kisima) and Lowland (near Wamba) settlements (Fig. 1).
- Focal-follow and time allocation protocols followed those described by Altmann (1974) and Ivey (2000).
- Kids were observed over two consecutive days with activities recorded throughout the day.
- Heart rate (HR) monitors and accelerometers provided non-invasive monitoring of physical activity intensity levels.
- Descriptive statistics and two-tailed t-tests are used to compare activities and HR across sex and age.
- Daily activities performed by children were categorized into Herding, Economic, and Leisure with:
 - **Herding:** activities related to supervision of livestock
 - **Economic:** activities contributing to the household/settlement
 - **Leisure:** activities related to play, food consumption, rest, and casual conversation

Table 1. Sample characteristics

	Boys	Girls	Total
N	7	8	15
Age 3-7.9	3	1	4
Age 8-13.9	4	7	11



Figure 2. Boys returning with water; young girl watering small stock.

Results

Table 2. Time in minutes that Boys & Girls, as well as Age Groups, spend engaged in each activity category.

	Economic (s.e.)	Leisure (s.e.)	Herding (s.e.)
Boys	36 (17.2)*	453.7 (50)	91.3 (29.7)
Girls	302.4 (82.3)	334.9 (82)	141.5 (80.0)
Age 3-7.9	82.7 (68.9)	493.2 (83)	36.2 (8.8)
Age 8-13.9	212.7 (70.7)	353 (36)	147.8 (57.7)

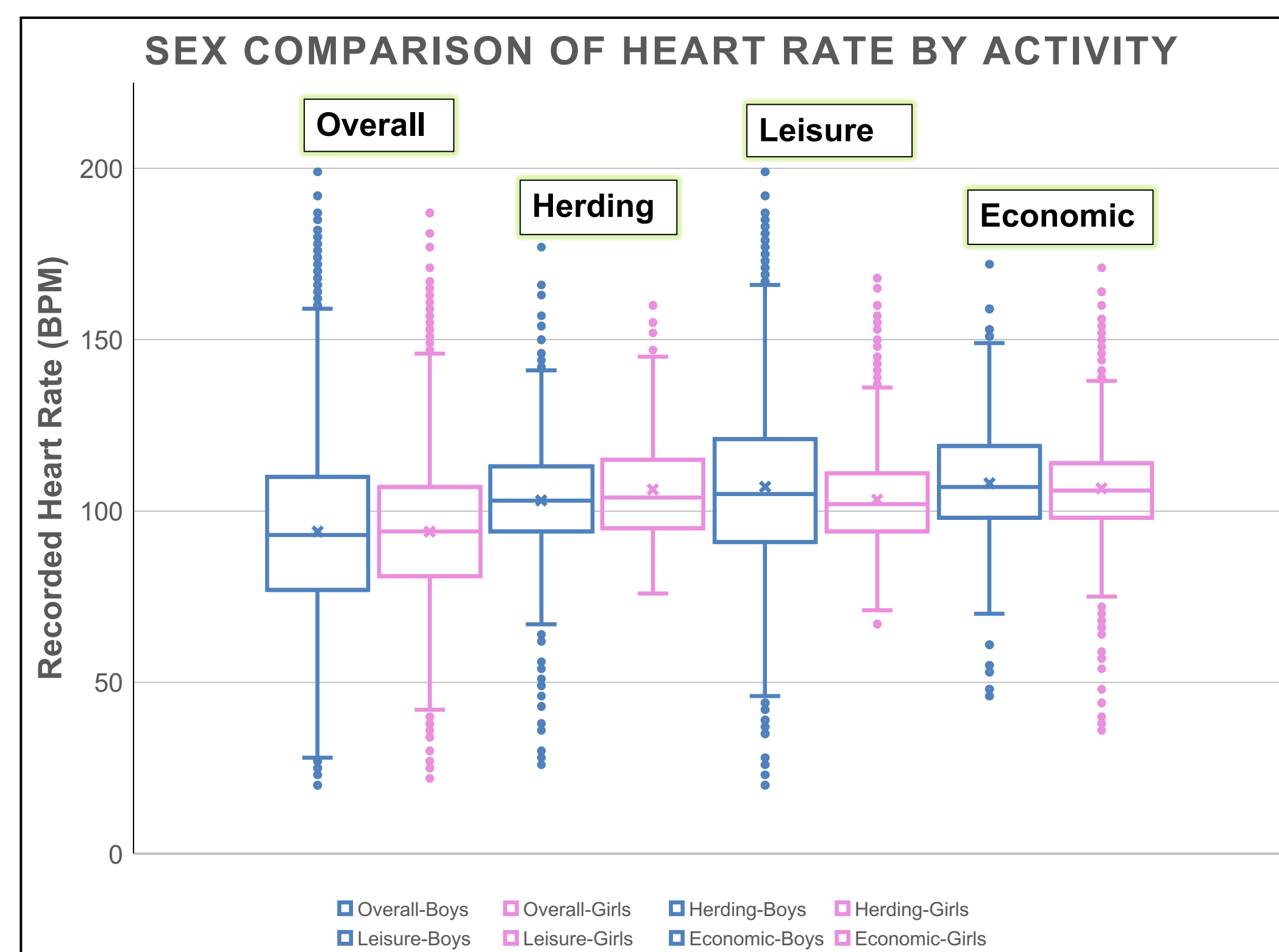


Figure 4. Comparison box plot of heart rate (BPM) values by activity type based on sex.

- Boys achieved the highest outlier heart rates during high intensity play [ex., soccer and sprinting] (Fig. 4).
- In general, heart rates were similar across sex and activity type (Fig. 4).

- Girls spent significantly more time engaged in **Economic activity** than boys (Fig. 5).
- Boys engaged in more **Leisure activity** than girls (Fig. 5).
- Younger kids spent significantly more time engaged in **Leisure** and less time engaged in **Economic** and/or **Herding activities** compared to older kids (Fig. 6).

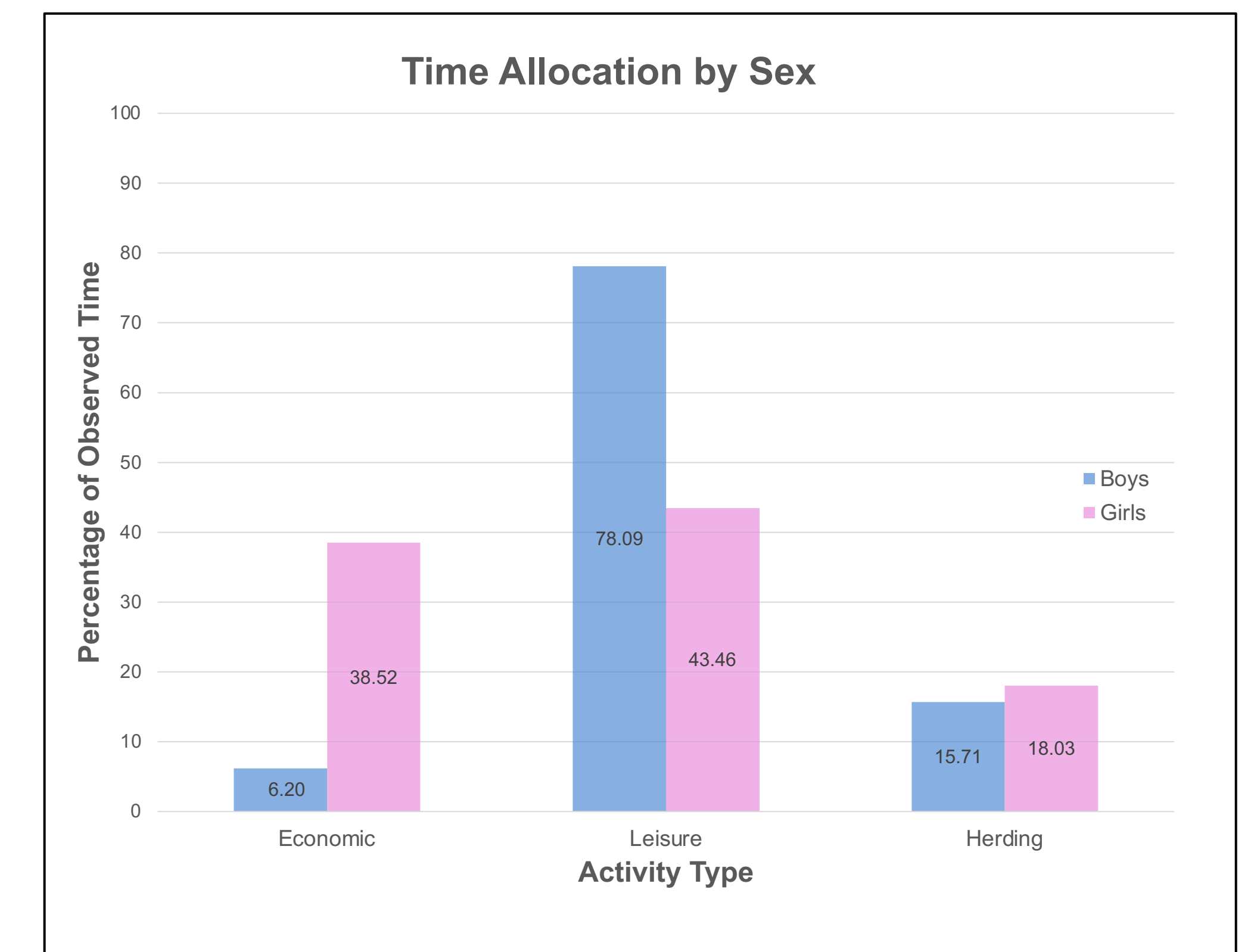


Figure 5. Time allocation of activities by sex.

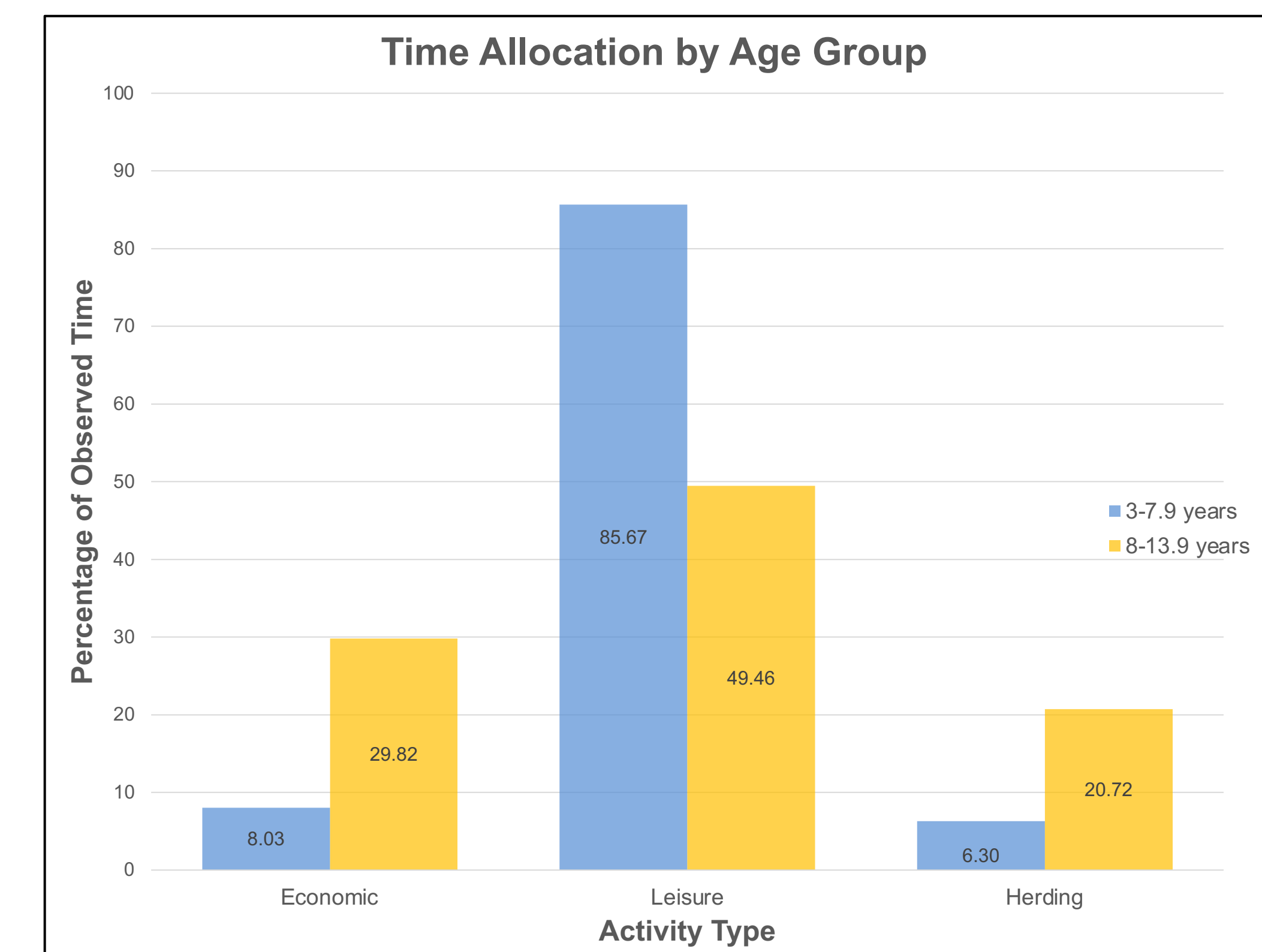


Figure 6. Time allocation of activities by age group.

Discussion

- For Samburu pastoralists, it appears that work related gender roles begin developing at early ages, with more overall economic/household activities, particularly younger sibling care, tasked to girls.
- Boys engage in more leisure; however, Samburu girls and boys spend near equal amounts of time working with animals.
- The unequal labor burden is more pronounced in Lowland girls, who have less access to school than any other subgroup.

Acknowledgments

We thank those Samburu kids who graciously allowed us to follow them during their daily activities. We also thank our research assistants who facilitated data collection, Kiyaa Lekeran, Danial Leseela, Celina Jeska Letirok, Sisina Kelemu, and Julius Lesirayon. Thanks to Dr. Charles Owuor Olungah for support in Nairobi. Support from NSF Award 1728743 (Straight, PI) and UNC-Chapel Hill Summer Undergraduate Research Fellowship grant (Plemmons).

References

- [1] Fratkin, E. 1989. Household variation in gender inequality in Ariaal pastoral production: results of a stratified time-allocation survey. *American Anthropologist* 91: 430-440.
- [2] Straight B. (1997). Gender, Work, and Change Among Samburu Pastoralists of Northern Kenya. *Research in Economic Anthropology* 18: 65-91.
- [3] Altmann, J. Observational study of behavior: sampling methods. *Behaviour* 49: 227-267
- [4] Ivey, P.K. 2000. Cooperative reproduction in Ituri Forest hunter-gatherers: who care for Efe infants? *Current Anthropology* 41: 856 -866.