



## Charles Darwin *In Memoriam*

Evolutionary looks at the why of biological and cultural phenomena.

# An Evolutionary Look at Football Soccer Celebration

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**ABSTRACT:** Football can be considered a symbolic struggle in which humans use behavioral mechanisms that evolved in hominid clans. Women, children and the elder are notably absent in most football violence. My observation of 50 groups celebrating 2014 World Cup results on the Costa Rican streets found that both sexes and all age groups participated equally, probably because group participation on the streets was safe, with violence concentrated in stadiums and inside homes.

**KEY WORDS:** sociobiology of football; evolutionary psychology of football; soccer.

Football can be considered a symbolic struggle in which humans use behavioral mechanisms that evolved in hominid clans (Cox, 2014). Young males may show a highly competitive and even aggressive attitude, with support from women; while children and the elder are expected to avoid dangerous situations that arise in association with football, such as stadium confrontations and street celebrations (Cox, 2014; Solano, 2014). Within the relative safety of their homes, women participate as fans in social networks, reaching 46 % of posts in the 2014 World Cup, but they mostly write about the players, not about the games themselves (Resnikoff, 2014).

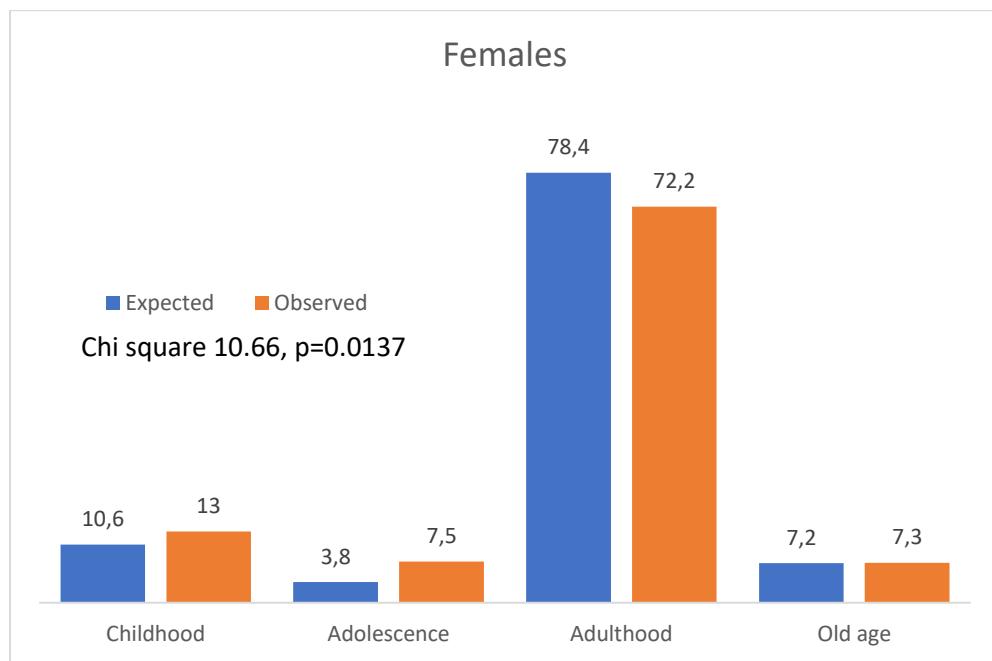
Most Costa Rica women do not like football: men who like it outnumber women 6 to 1 (INEC Costa Rica, 2016). The few studies on this subject indeed show that football matches coincide with male violence (Solano, 2014; Fundación Justicia y Género, 2017; Monge, 2019); and that women, children and the elderly are minorities in stadiums (Acuña-Gómez & Acuña-Delgado, 2017). There are, however, no controlled experiments about this, so here I present a “natural experiment” in which the street celebrations take place in a safe environment, i.e. the results of football matches are publicly celebrated, but there are no aggressive encounters that endanger the participants. My hypothesis was that, when there is no fear of violence, females, children and elderly would participate in equal proportion to men.

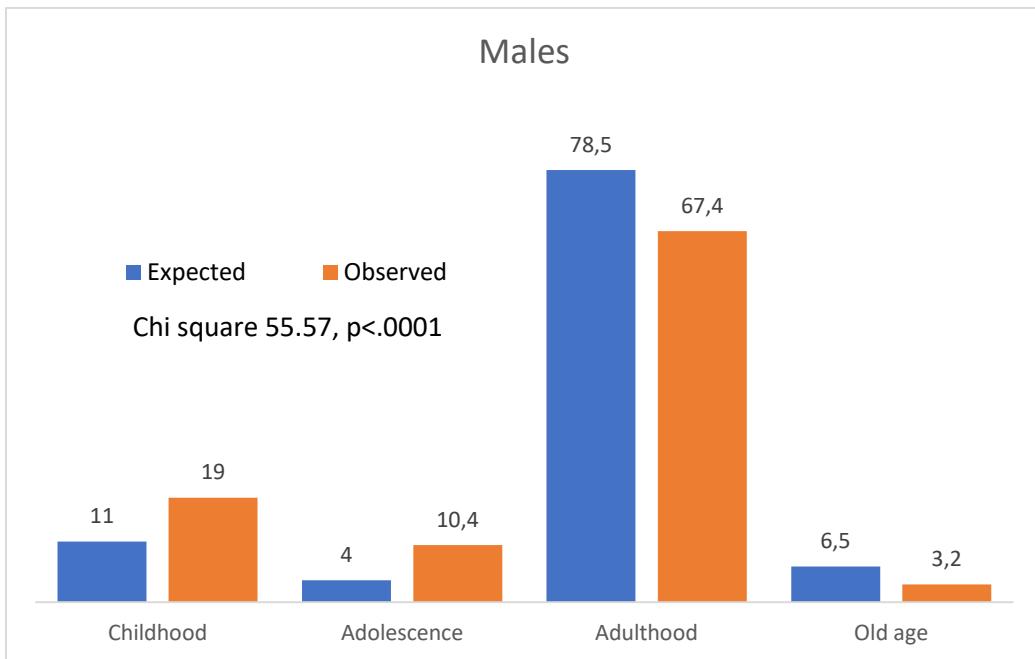
To do this, I checked participation in the public celebration of its team accomplishments among the Costa Rican population, during the 2014 Football World Cup.

I made a transect on car along the Interamerican highway from Cerro de la Muerte to Vásquez de Coronado on June 2014 and photographed about 50 groups that were celebrating on the street.

The numbers of children, teenagers, adults and elderly-looking people (wrinkled skin, white hair) were counted and converted to percentages to compare with the known percent composition of the Costa Rican 2014 population estimates for those age groups according to Rosero (2002).

The data do not allow rejection of the hypothesis: in general, both sexes and all ages are equally present in the photographs of groups that publicly celebrated the accomplishments of the Costa Rican team in the 2014 Football World Cup (Figure 1).





**FIGURE 1:** Percentage of people, by age and sex, celebrating football results in in the streets of Costa Rica. The bars of their participation match those of their proportion in the population. Females slightly dominate: 52 % female (N = 718), Binomial test p = 0.0199.

In conclusion, most of the stadium audience are men, but, when it is safe to publicly participate in support celebrations for their group, Costa Ricans of all subgroups participate equally in the celebration of soccer.

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**EDITED BY: Carolina Seas and Priscilla Redondo.**

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