Life Expectancies of Major League Baseball Players

Physical activity contributes to better health and longer lives (Andersen et al. 2000; Paffenbarger et al. 1993). But longevity among professional and elite athletes do not have consistent results and show different outcomes from the general public (Karvoneme et al. 1984; VanSaase et al. 1990; Waterbor et al. 1998; Sarna et al. 1993; Menottie et al. 1990). For example, Sarna et al. (1993) find significantly different survival curves between different sports groups (endurance, team, and power) and an overall difference between world class athletes and comparable health non-athletes. They also find that elite athletes in endurance and team games have lower odds of all-cause mortality, cardiovascular diseases, and cancer (Sarna 1993). Accordingly, we use this study to further information about life expectancies among a group of select athletes – Major League Baseball Players. Mortality patterns among this highly documented group will reveal the importance of demographic patterns of age, cohort, and period effects, provide potential information about physical activity and mortality, and will allow us to compare trends to the general U.S. population.

Major League Baseball players are a unique and interesting sample for the study of status and mortality outcomes. First, major league players are socioeconomically homogenous. Players have similar education levels, with few players gaining college degrees (Shea 2004). Relative to average Americans, major league players have high levels of income ranging from $300,000 to $26 million a year. Second, major league baseball players have high levels of occupational prestige, with discernable status gradients within this group. Third, baseball players have high levels of physical fitness punctuated by extreme levels of competition, a long regular-season schedule, and off-

season workouts. High levels of health reduce causality issues that surround studies of health and status. In this case, we can control for the impact of health on performance. Fourth, baseball players are highly visible, well-documented public figures. Their performance is recorded, evaluated, and highly scrutinized in a public forum. Their careers and contracts are often based on performance related criteria. Detailed information about their births, deaths, and career status are available and are accurate and reliable.

Aims

We use a unique dataset of high profile athletes to show the impact of age, cohort, and period on life expectancy.

Data and methods

The data for this research is compiled from *Total Baseball* (Thorn et al. 2004), the official encyclopedia of Major League Baseball. It contains detailed information about every player who has ever played in the major leagues and includes information on birth and death dates and career performance along with numerous play-related statistics. We include Major League Players who have begun play in the years 1902 to 2004. We focus on position players because of the unique position occupied by pitchers. We also limit our dataset to players who have played at least one year, and eliminate players who are on the expanded roster for a month or less. This eliminates players who were brought up to the majors solely for their "cup of coffee." From this information, we created a person-level dataset with age, period, and cohort for position players.

This research uses life-table analysis to determine life expectancy. We present life tables in both one-year unabridged and 5-year abridged tables. The use of life-tables allows us to examine the average remaining life at each age category and allows us to make national comparisons. We first present a one-year unabridged life for the entire population. Next, we create life-tables by period and cohort. Periods are defined by baseball eras as noted in *Total Baseball*, specifically the Early (1902-1945), Golden (1946-1968), and Modern Eras (1969-2003). Cohorts are defined by birth year in 10-year intervals. We present the average life expectancy by age groups for periods and cohorts to determine changes in mortality patterns.

Results

This paper builds on a recently accepted manuscript (Witnauer et al. 2008), by focusing on life rather than career expectancy. By doing so, we are creating additional information that will be highly relevant to demographic issues of mortality, health, and SES. Currently, we are in the process of producing life-table results. As expected, our preliminary findings show that overall life expectancies are higher than the general U.S. population. There also appears to be higher life expectancies throughout the various periods. We also expect to find increasing life expectancies over time and with each additional cohort. We plan to present findings in both tables and graphs. Additionally, we intend to make comparisons to the general U.S. population.

Thank you for your consideration.

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