

Essay

Name:

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Course:

Date of Submission:

How do the data from the cemetery compare to that from the newspaper? If they do not differ, suggest why. Do the two populations differ in survivorship? At what ages, do they differ? What possible factors may account for these differences?

Using the survivorship curve and q_x , which is the probability of someone dying before age $x+1$, to measure longevity, it is evident that there is stark contrast between cemetery data, which represent pre-1990, and post-1990, which represent post-1990. Survivorship rate is higher during post-1990 than during pre-1990. During pre-1990, rapid decline in the number of people alive is at the ages of 60-69 while during post-1990, it is at the ages of 70-79. During the post-1990, there is a possibility of a person attaining more than 100 years whereas during the pre-1990 the terminal age a person of either sexes can attain is between the ages of 90 to 99. This observation is reaffirmed by comparing q_x of both time periods and for both sexes. q_x for pre-1999 is higher than q_x for post-1990, showing that people were at greater risk of dying during pre-1990 than in post-1990. There are differences in survivorship between sexes in the two time periods, pre-1990 and post-1990. During pre-1990, males have higher survivorship rate than females while in post-1990, females have higher survivorship rate than males.

Differences in survivorship rates in both time periods may be attributed to several factors. One is improved healthcare services during post-1990, thus contributing to reduced mortality cases. Unlike pre-1990 when people died from preventable disease. Secondly, higher income afford people to eat healthy foods that contribute to overall improved health, consequently, reducing cases of nutritional diseases and deaths (Francis, 2012).

How do the sexes differ in survivorship and longevity? Is the pattern different now compared with pre-1900? At what ages, specifically, have the greatest changes in mortality occurred? Can you think of reasons for these changes?

Survivorship will be assessed using the survivorship curve while longevity will be accessed using L_x . Comparing the survivorship and longevity of sexes in respective period that is pre-1900 and post-2000 indicate slight differences between the two sexes. During the pre-1900,

males show a slightly higher survivorship rate as compared to women. However, both sexes show rapid decline in the number of people alive at the ages of 60-69. Longevity will be assessed using L_x , which is the number of person-years lived in age $(x, x+n)$ (Swanson, Siegel & Shryock, 2004). It is evident from the life table that L_x for males is higher than of females up to the ages of 70-79; however, after the ages 70-79 females show higher L_x . This is interpreted to mean that males recorded higher longevity than females during pre-1990 up to the ages of 70-79, and thereafter from 70-79 females' longevity increases than that of males. This supposition is confirmed by l_x , which shows that more females attain the age of 90-99 than males.

Comparing the survivorship and longevity of sexes in post-1900, it is evident from the survivorship curve that females have higher survivor rates than males. Similarly, evaluation of longevity illustrates the same case. L_x shows that the number of person years lived in age interval $(x, x+n)$ is higher for females than for males; however, males are at a higher probability of attaining ages greater than 100. This illustrates that during post-1990 females record higher longevity than males. Both sexes show rapid decline in the number of people alive at the ages of 70-79, with that of male been sharper than for females. Surprisingly, all females die at the ages of 90-99, but males have a probability of attaining more than 100 years. The greatest change in mortality for pre-1990 occurred at the ages of 60-69 while for post 1990 is at ages of 70-79. This is because of senility, as it results to people growing weak and eventually dying.

What two possible biases might there be in you method of data collection? (Are babies as likely to be reported in the newspaper as adults? How might demographic changes over the last 100 years bias the cemetery data? what about age-specific immigration rates?)

During data collection a number of biases may arise: a) Overestimation or underestimation of births. b) Overestimation or underestimation of deaths c) overestimation or underestimation of population. Inaccurate data on births, deaths and population results to biased life table, consequently, inaccurate results. For example, it is easier to ascertain data of births that

is babies born in post-1990 than in pre-1990 because mothers are giving birth in hospitals in developed countries, and also it is mandatory for children to be given immunization, thereby, making it possible to capture births in the post-1990. Moreover, demographic data and information is more accurately obtained in post-1990 than in pre-1990 due to advanced technologies that facilitate data capture and storage.

Demographic changes in the last 100 years may bias the cemetery data. Demographic changes may be attributed to changes in population, age structure and ethnic and race diversity (Shrestha & Heisler, 2011). In the last 100 years there have been major changes in the demographic profile of society as more aged people than before; there is increased net immigration and high population. During post-1990 there has been increased age-specific immigration as young people immigrate into the country to look for jobs. This has had a net increase effect on l_x despite deaths of old people. In addition, there have been demographic changes, which have a net increase in population, consequently contributing to higher births than during pre-1990, thus resulting to higher l_x . Though the number of old people has been increasing during post-1990, there has been reduced q_x due to better healthcare services.

References

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