

LIFE-SPAN DEVELOPMENT

By Kathy Taylor

Name of Course	Life-span Development
-----------------------	-----------------------

Course Level	PSY 240
---------------------	---------

Possible subject Areas	Psychology, Anthropology, Human Development, Sociology
-------------------------------	--

Identify quantitative concepts/skills that students will develop	<p>Upon completion of these activities, students will be able to evaluate and manipulate Infant Mortality Rate data using the following skills:</p> <p><u>Mathematic Skills</u></p> <ul style="list-style-type: none">• Mean• Median• Percent Change• Data Analysis <p><u>Applied QL Skills</u></p> <ul style="list-style-type: none">• Learn and use basic statistical tools such as mean, median, and percent change• Read, interpret and create statistical tables and graphs• Interpret and discuss real world problems given symbolically, visually, numerically and verbally• Read and think critically about research data presented in the popular press• Compare popular press data with empirical research articles• Read empirical research and discuss primary findings• Critically think about the limitations and strengths of research as it is presented to the public
---	---

	<u>Project Overview</u>
--	--------------------------------

Overview	<p>In looking at the factors that affect infant mortality rates, students are often surprised that the United States ranks number eight in the world. One way for students to understand why the United States ranks lower than some other countries is to look at the data to see what factors impact infant mortality rates.</p> <p>For this exercise, students will review data from the 2006 Human Development Report and analyze further the basic statistical relationships (mean and median) among high human development, medium human development and low human development countries. In addition they will look at the percent change between 1970 and 2004 data for selected countries and learn to chart those changes.</p>
-----------------	--

Background (if needed)	<p><u>In-class Instruction</u></p> <p>As the various types of research methods, efficacy and research ethics are reviewed at the beginning of the course, an additional component will be added to review basic statistics that are used in critically analyzing and interpreting data from empirical research as well as the popular press.</p> <p>Students will be given a Quick Reference Guide for Understanding Basic Statistics developed from the RobertNiles.com site "Statistics Every Writer Should Know". Simple exercises will be done in class to help students grasp the basic concepts of mean, median, percent change and data analysis.</p> <p>In addition, students will review basic Excel skills to create their own data sheets and display data through charts. http://www.vertex42.com/Excel2007/excel-tutorial.htm</p>
---------------------------	--

Describe/List the measurable outcomes or learning goals of your activity	<ul style="list-style-type: none"> • Students will read and think critically about research data presented in the popular press • Students will critically analyze empirical research data • Students will compare popular press data with empirical research articles • Students will read empirical research and discuss findings • Students will critically think about the limitations and strengths of research • Students will be more confident in their basic statistical skills such as mean, median, percent change and charting data using Excel
---	---

<h2>STUDENT INSTRUCTIONS</h2> <p><u>QL Activity #1</u> This exercise will utilize data from the 2006 Human Development Report which includes information on Infant Mortality Rates across the world.</p> <p>For additional information on Infant Mortality: http://en.wikipedia.org/wiki/Infant_mortality</p>	
--	--

In this exercise, you will review and manipulate data using Excel, graphically display selected data and answer questions where you will need to obtain concrete information from the data and also make educated assumptions when tying the data together with the accompanying research.

For assistance in brushing up on your basic descriptive statistics and Excel skills please use the links below:

["Statistics Every Writer Should Know"](#)
[Excel Tutorial 2007 - A Practical Guide](#)

The following link is the data table from which you will extrapolate the information you need to complete your assignments.

http://hdr.undp.org/hdr2006/pdfs/report/HDR_2006_Tables.pdf

Select table #10: Survival and Setbacks and complete the following exercises.

1. What is the mean infant mortality rate for the High Human Development countries (indicated on the Infant Mortality Data Table) for the year 2004? Take the data you need from the Infant Mortality Data Table and copy it to an Excel worksheet (hint: make sure numbers copy as numbers and not text). You will need to use the function feature to create a formula for the answer.
2. What is the median infant mortality for Mexico, Tonga, Romania, Mauritas, and Malaysia?
3. What is the percentage change of infant mortality rates between 1974 and 2000 for the following countries:

Norway
Iceland
United States

Belarus
Brazil
Colombia

Togo
Yemen
Kenya

Create a data table using an Excel worksheet and create a bar chart to illustrate the percentage change averages for the above High Human Development, Medium Human Development and Low Human Development countries. (Note: Create two worksheets in the same Excel file- one to use to determine the Percentage Changes for each country and one for comparing change averages and creating your bar chart. You will also need to use the function feature for

your calculation.)

4. Follow the country links on the following Infant Mortality Indicator <http://hdr.undp.org/hdr2006/statistics/indicators/75.html> for the countries you graphed above.
 - a. What educated assumptions can you make about why the United States ranks number eight?
 - b. How does the United States rank in comparison to Medium Human Development Countries?
 - c. What are some of the reasons for the decline in Infant Mortality in the Low Human Development countries?

QL Exercise #2

For the next class you will look at the CNN article on Infant Mortality. Do a search and find the original research report this article is based upon. Read the article and write a two page response to the following:

1. Did the headline bias you in any way on what you were about to read?
2. What was the initial interpretation you came away with from the article?
3. After reviewing the Human Development Report 2006 data does the CNN article accurately reflect the empirical research?
4. What factors do you suppose contribute to babies in industrialized nations such as the U.S. being born too small or too early?
5. After finding the original research report cited in the article did you verify the claims made in the article?
6. Was the statistical data in the article accurately portrayed or was it taken out of context? Provide support for your answer.

Describe how you plan to assess the effectiveness of this module

Students will complete the above exercises and submit their work on Bb. There will be an in-class sharing and discussion of responses to assess whether students were prepared enough in the statistical and Excel usage. Discussion will generate critical thinking and consideration of responses. In addition, we will look at the responses to the CNN article and talk about why the press presents information the way it does, who does it benefit, and what are the ethical implications behind it. A pre-test and post-test will be given to assess confidence in and ability to calculate and interpret basic statistics.