The Effect of Self Reported Optimism on Blood Pressure in an Adult Population: A Pilot Study

Christopher McConnell
Dominican University of California
Spring 2015
Introduction

● New research has shown a correlation between optimism and health outcomes
● Optimism can be defined as having a positive view of the future along with pleasurable demeanor of emotions such as joy, happiness, and contentment
● Also known as positive affect
● Optimistic individuals may still experience negative emotions such as stress, anxiety, and anger
High blood pressure, otherwise known as hypertension is a common healthcare problem.

Often has no symptoms but has far reaching health consequences if not controlled.

Critical clinical measurement of health.
The aim of this investigation is to examine the relationship between self-described optimism and blood pressure in the adult population over the age of 40 years old.
Literature Review

● Effects on incidences of coronary events
● Effects on coronary markers and lifestyle
● Effects on recovery time and coping
Effects on Incidences of Coronary Events

- Significantly lower occurrence of heart disease noted
- For each one point increase in level of optimism, heart disease risk dropped by 22%
- Unclear if linked to lifestyle change or physiologic effects
Effects on Coronary Markers and Lifestyle

- High levels of optimism associated with high levels of HDL cholesterol
- High levels of optimism associated with low levels of glucose, triglycerides, and interleukin-6
- High levels of optimism may facilitate positive life changes
Effects on Recovery Time and Coping

- Looks to determine effect hope and optimism have upon recovery times
- Hope and optimism found to enhance coping abilities
- Found that optimism helped patients adapt to new stage in life
Gap in Research

- Blood pressure monitoring in relation to optimism levels
- Reasons for observed differences between groups - Physiologic or due to other external factors?
Research Question

- What is the correlation between self-described optimism levels and blood pressure readings in the adult population of Marin County?
Theoretical Framework

- Learned Optimism introduced by Seligman
- Higher achievers and better overall health
- Differing views in overcoming adversity
- Optimists tackle problems differently
Subjects

- Subjects were recruited by face to face convenience sampling at Whistlestop in San Rafael, CA
- Subjects were men and women over the age of 40 who are members of Whistlestop and use their facilities
Sample Size

- Final sample size of 23 was achieved following convenience sampling
- 8 participants were male, 15 were female
- Mean age of participants was 69
- Median age of participants was 72
Measures and Instruments

- LOT - R
- Demographics Sheet
- Blood Pressure Recording Sheet

**Items of the Life Orientation Test-Revised (Lot-R)**

M.E. Scheier, C.S. Carver & M.W. Bridges

Please place the appropriate number, either 0, 1, 2, 3, or 4 on the line beside each statement below that corresponds to the extent of agreement or disagreement with each. Please be as honest as you can. There are no right and wrong answers just your judgement about you.

0 = strongly disagree
1 = disagree
2 = neither agree nor disagree
3 = you agree
4 = strongly agree

Remember place the number 0, 1, 2, 3 or 4 on the line next to each statement.

1. In uncertain times, I usually expect the best. ________________________
2. It’s easy for me to relax. ________________________
3. If something can go wrong for me, it will. ________________________
4. I’m always optimistic about my future. ________________________
5. I enjoy my friends a lot. ________________________
6. It’s important for me to keep busy. ________________________
7. I hardly ever expect things to go my way. ________________________
8. I don’t get upset too easily. ________________________
9. I rarely count on good things happening to me. ________________________
10. Overall, I expect more good things to happen to me than bad. ________________________
Reliability and Validity

- Reliability was assessed through the use of the same instruments for measurement for the duration of the study.
- Validity of tools and questions was assessed by Dr. Patricia Harris, who agreed they were well intended for their purpose.
Step by Step Procedures

1. Secured IRB approval
2. Attain permission to use Whistlestop area
3. Recruiting station set up at Whistlestop
4. Have participants fill out Consent, LOT-R, Demographics, and have BP checked
5. Once target sample is reached, data analysis and scoring occurred
6. Discussion
Statistical Analysis

- Plotted Data Points
- Pearson Correlation Coefficient
- Coefficient of Determination
Results

**Gender**

- Male: 8
- Female: 14

**Tobacco Use**

- Past or Current Smoker: 25%
- Non-Smoker: 74%
Results (Continued)

Blood Pressure Medication

- 52% Taking Blood Pressure Medication
- 48% No Medication

Family History of Heart Disease

- 16 Family History of Heart Disease
- 14 No Family History
Results (Continued)

- Systolic Pressure Range: 109-171
- Mean: 133  Median: 135
- LOT-R Raw Score Range: 10-24
- Mean: 16.91  Median: 18
Discussion

- Recruiting subjects at limited site
- Language barrier
- Sample size not random
- Did not control for BP medications
- Clinical Significance
I would like to express the deepest gratitude to Dr. Luanne Linnard-Palmer, Dr. Patricia Harris, Dr. June Wilson, Dr. Diara Spain, and the staff at Whistlestop for their help and input in the realization of this project!