Health Effects of Financial Education in Single, Low-Income Women

Julie Kalkowski, MSW, Nicole D. White, PharmD, Kathleen Packard PharmD, MS, BCPS, Ann Ryan-Haddad, PharmD, Lisa Black, PT, DPT
Kathy Fiecky, OTD, OTR/L, Jennifer Furze, PT, DPT, Lori Rusch, PhD, RN, CNE, Yongyue Qi, MS
Creighton University Heider College of Business, School of Pharmacy and Health Professions and School of Nursing

**Purpose**

- Persons under financial stress are more likely to engage in unhealthy behaviors including smoking tobacco, drinking alcohol and maintaining a poor diet. These unhealthy behaviors are associated with a higher incidence of chronic disease and greater cardiovascular risk.
- In an effort to decrease financial strain in low-income single mother families, a University sponsored Financial Success Education Program was developed and implemented in a large Midwestern city.
- The purpose of the research is to assess the two-year effect of a financial education program on the health of single women of low income.

**Methods**

- The study was approved by the University’s Institutional Review Board and participants provided written informed consent and HIPAA authorization.
- The Financial Success Program (FSP) is a multi-disciplinary education program for low-income single mother families.
- Women enrolled in the program participate in nine weeks of education sessions followed by a year of personalized financial coaching.
- Baseline demographic and health information including age, height, weight, smoking status, physical activity, blood pressure, chronic disease history, quality of life and hopefulness were collected for participating women.
- Data collected at baseline was compared to data collected at years one and two using repeated measures ANOVA.

**Results**

- A total of 30 women were enrolled and 21 continued through the two year follow-up to be included in this per-protocol analysis.
- Two years following the financial education program intervention, women demonstrated an increase of ± $110 in mean annual income from baseline (p=0.012).
- Participants also experienced significant improvements in Quality of Life (QOL) and hopefulness. Specifically, improvements were seen in the physical, psychological and environment QOL domains and mean trait hope scale scores.
- In addition to a significant reduction in waist circumference (36.8 inches at baseline v. 36.1 inches at year two, p=0.046), nearly half of the participating women (n=10, 48%) lost weight at follow-up, with an average weight loss of 2.08 pounds.
- While significant changes were not observed, trends in decreased fast food consumption and increased time exercising were seen over the two year follow-up.

**Conclusion**

- Financial education has a significant, sustained effect on the health and the health-related quality of life of single, low-income women.
- When designing multi-faceted community-based health promotion programs, financial stress should be addressed through financial education.

**References**

- Available upon request

**Baseline Demographics (n=21)**

| Mean Baseline Age (years) | 35.0 ± 6.3 |
| Race                     | African American 11 (52%), White 9 (43%), Asian 1 (5%) |
| Mean Baseline Annual Household Income | $30,628 ± $14,801 |
| Education                | College Graduate 10 (48%), Some College 9 (43%), Some High School 1 (5%), High School Graduate 1 (5%) |

**Biometrics, Lifestyle, Income, Quality of Life and Hopefulness Data (n=21)**

| Mean Weight (pounds)      | Pre-Intervention 175.4 ± 49.8 | Post-Intervention Year 1 175.7 ± 49.0 | Post-Intervention Year 2 173.3 ± 45.0 | P-Value 0.705 |
| Mean Body Mass Index      | 30.1 ± 8.2 | 30.5 ± 7.8 | 30.1 ± 8.0 | 0.635 |
| Mean Waist Circumference (inches) | 36.8 ± 6.3 | 37.8 ± 6.4 | 36.1 ± 5.5 | 0.046 |
| Mean Exercise per Week (minutes) | 134.8 ± 277.1 | 231.3 ± 465.9 | 239.5 ± 420.6 | 0.401 |
| Mean Weekly Fast Food Consumption (visits) | 2.18 ± 1.5 | 1.56 ± 1.1 | 1.52 ± 1.0 | 0.058 |
| Mean Annual Income (dollars) | 30,628 ± 14,801 | 31,865 ± 16,142 | 36,738 ± 16,535 | 0.012 |
| Mean Domain 1: Physical Health* | 21.0 ± 2.9 | 23.4 ± 3.0 | 23.9 ± 2.7 | <0.001 |
| Mean Domain 2: Psychological* | 20.3 ± 3.1 | 21.5 ± 3.3 | 22.9 ± 2.9 | <0.001 |
| Mean Domain 3: Social Relationships* | 27.4 ± 5.0 | 30.8 ± 6.1 | 33.1 ± 4.5 | <0.001 |
| Mean Trait Hope Scale Score* | 50.4 ± 8.3 | 54.8 ± 7.9 | 55.3 ± 7.1 | 0.002 |

*Trait Hope Scale Score Range: 8-64

**Pre-Intervention vs. Post-Intervention**

- **Mean Baseline Age**: 35.0 ± 6.3
- **Race**: African American 11 (52%), White 9 (43%), Asian 1 (5%)
- **Mean Baseline Annual Household Income**: $30,628 ± $14,801
- **Education**: College Graduate 10 (48%), Some College 9 (43%), Some High School 1 (5%), High School Graduate 1 (5%)