

## **STUDY #1:**

### **Long-term Effects of an Early Childhood Intervention on Educational Achievement and Juvenile Arrest - A 15-Year Follow-up of Low-Income Children in Public Schools**

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**Context** Most studies of the long-term effects of early childhood educational interventions are of demonstration programs rather than large-scale public programs. Previous studies of one of the oldest federally funded preschool programs have reported positive effects on school performance, but effects on educational attainment and crime are unknown.

**Objective** To determine the long-term effectiveness of a federal center-based preschool and school-based intervention program for urban low-income children.

**Design, Setting, and Participants** Fifteen-year follow-up of a nonrandomized, matched-group cohort of 1539 low-income, mostly black children born in 1980 and enrolled in alternative early childhood programs in 25 sites in Chicago, Ill.

**Interventions** The Chicago Child-Parent Center (CPC) Program (n = 989 children) provides comprehensive education, family, and health services and includes half-day preschool at ages 3 to 4 years, half- or full-day kindergarten, and school-age services in linked elementary schools at ages 6 to 9 years. The comparison group (n = 550) consisted of children who participated in alternative early childhood programs (full-day kindergarten): 374 in the preschool comparison group from 5 randomly selected schools plus 2 others that provided full-day kindergarten and additional instructional resources and 176 who attended full-day kindergartens in 6 CPCs without preschool participation.

**Main Outcome Measures** Rates of high school completion and school dropout by age 20 years, juvenile arrests for violent and nonviolent offenses, and grade retention and special education placement by age 18 years.

**Results** Relative to the preschool comparison group and adjusted for several covariates, children who participated in the preschool intervention for 1 or 2 years had a higher rate of high school completion (49.7% vs 38.5%; P = .01); more years of completed education (10.6 vs 10.2; P = .03); and lower rates of juvenile arrest (16.9% vs 25.1%; P = .003), violent arrests (9.0% vs 15.3%; P = .002), and school dropout (46.7% vs 55.0%; P = .047). Both preschool and school-age participation were significantly associated with lower rates of grade retention and special education services. The effects of preschool participation on educational attainment were greater for boys than girls, especially in reducing school dropout rates (P = .03). Relative to less extensive participation, children with extended program participation from preschool through second or third grade also experienced lower rates of grade retention (21.9% vs 32.3%; P = .001) and special education (13.5% vs 20.7%; P = .004).

**Conclusions** Participation in an established early childhood intervention for low-income children was associated with better educational and social outcomes up to age 20 years. These findings are among the strongest evidence that established programs administered through public schools can promote children's long-term success.

*Journal of the American Medical Association*, 2001; Vol. 285, pages 2339-2346

## **STUDY #2:**

### **Regular Outpatient Medical and Drug Abuse Care and Subsequent Hospitalization of Persons Who Use Illicit Drugs**

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**Context** Patients and the public could benefit from identification of factors that prevent drug users' heavy reliance on inpatient care; however, optimal health care delivery models for illicit drug users remain ill-defined.

**Objective** To evaluate associations of outpatient medical and drug abuse care with drug users' subsequent hospitalization rates.

**Design and Setting** Retrospective cohort study of data from longitudinally linked claims for all ambulatory physician/clinic services and drug abuse services covered by the New York State Medicaid program.

**Subjects** A total of 11,556 human immunodeficiency virus (HIV)-positive and 46,687 HIV-negative drug users.

**Main Outcome Measures** Hospitalization in federal fiscal year (FFY) 1997 compared by 4 patterns of care in FFY 1996: (1)Regular drug abuse care (greater than or equal to 6 months in 1 program), (2)Regular medical care (>35% of care from 1 clinic, group practice, or individual physician), (3)Both, or (4)Neither.

**Results** Hospitalization occurred in 55.6% of HIV-positive and 37.5% of HIV-negative drug users, with a mean of 27.5 and 24.5 inpatient days, respectively. In HIV-positive drug users, the adjusted odds ratio (AOR) for hospitalization was lowest among those with both regular medical and drug abuse care [Pattern #4] (AOR, 0.76; 95% confidence interval [CI], 0.67-0.85) followed by those with regular medical care alone [Pattern #2] (AOR, 0.82; 95% CI, 0.74-0.91) and regular drug abuse care alone [Pattern #1] (AOR, 0.85; 95% CI, 0.76-0.96) vs those with neither [Pattern #4]. In HIV-negative drug users, the AOR of hospitalization was lower for those with regular medical and drug abuse care [Pattern #3] (AOR, 0.73; 95% CI, 0.68-0.79), regular drug abuse care alone [Pattern #1] (AOR, 0.71; 95% CI, 0.66-0.76), and regular medical care [Pattern #2] (AOR, 0.91; 95% CI, 0.86-0.95) vs those with neither [Pattern #4]. Both types of care showed favorable effects for all but drug abuse-related hospitalizations.

**Conclusion** Our data indicate that regular drug abuse care with regular medical care for drug users is associated with less subsequent hospitalization.

*Journal of the American Medical Association*, 2001; Vol. 285, pages 2355-2362

### **STUDY #3:**

#### **Risk of Overweight Among Adolescents Who Were Breastfed as Infants**

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**Context** Overweight during adolescence predicts short- and long-term morbidity as well as obesity in adulthood. The prevalence of overweight among adolescents is high and continues to increase. Physiological and behavioral mechanisms and preliminary epidemiologic data suggest that breastfeeding could lower the risk of subsequent obesity in adolescence.

**Objective** To examine the extent to which overweight status among adolescents is associated with the type of infant feeding (breast milk vs infant formula) and duration of breastfeeding.

**Design, Setting, and Subjects** Survey of 8186 girls and 7155 boys, aged 9 to 14 years, who are participants in the Growing Up Today Study, a nationwide cohort study of diet, activity, and growth. In the fall of 1996 we mailed a questionnaire to each of the subjects, and in the spring of 1997, we mailed a supplemental questionnaire to their mothers, who are participants in the Nurses' Health Study II.

**Main Outcome Measure** Overweight status defined as body mass index exceeding the 95th percentile for age and sex from US national data.

**Results** In the first 6 months of life, 9553 subjects (62%) were only or mostly fed breast milk, and 4744 (31%) were only or mostly fed infant formula. A total of 7186 subjects (48%) were breastfed for at least 7 months while 4613 (31%) were breastfed for 3 months or less. At ages 9 to 14 years, 404 girls (5%) and 635 boys (9%) were overweight. Among subjects who had been only or mostly fed breast milk, compared with those only or mostly fed formula, the odds ratio (OR) for being overweight was 0.78 (95% confidence interval [CI], 0.66-0.91), after adjustment for age, sex, sexual maturity, energy intake, time watching television, physical activity, mother's body mass index, and other variables reflecting social, economic, and lifestyle factors. Compared with subjects who had been breastfed for 3 months or less, those who had been breastfed for at least 7 months had an adjusted OR for being overweight of 0.80 (95% CI, 0.67-0.96). Timing of introduction of solid foods, infant formula, or cow's milk was not related to risk of being overweight.

**Conclusion** Infants who were fed breast milk more than infant formula, or who were breastfed for longer periods, had a lower risk of being overweight during older childhood and adolescence.

*Journal of the American Medical Association*, 2001; Vol. 285, pages 2461-2467

#### **STUDY #4:**

**The following two newspaper stories covered the same journal article.**

#### **Feeling Of Hopelessness Increases Risk Of Dying**

Those who lack hope about the future may be at risk of dying prematurely, suggest the results of a study of nearly 800 elderly Americans.

"Why do some people die while others, who may be no less ill, continue to live? One answer to this question may lie in the presence or absence of hope," says lead study author Stephen L. Stern, M.D., of the department of psychiatry at The University of Texas Health Science Center at San Antonio.

Approximately half of the study participants were Mexican American, the fastest growing group of elderly Americans. Other studies also have found hopelessness to predict death, but these studies have generally focused on Europeans or European Americans.

To assess hopelessness, Stern and colleagues asked the study participants one question: "Are you hopeful about the future?" Approximately 10 percent of participants answered "no" to this question and were classified as "hopeless."

During a three-to-seven year period after answering this question, significantly more hopeless study participants died than hopeful participants. Specifically, 29 percent of the hopeless participants died, compared with 11 percent of the hopeful participants.

The study results are published in the May issue of the journal *Psychosomatic Medicine*.

The researchers noted several study limitations, one being their measurement of hopelessness by a single question, which prevented them from assessing how different degrees of hopelessness affect mortality.

They also called for more research on the causes of hopelessness, as well as on the effectiveness of various treatments, such as antidepressants and psychotherapy. The effects of hopelessness may vary among individuals depending on factors such as cultural background, childhood experiences, economic security and whether hopeless individuals also are experiencing depression, according to the study.

More research is also needed on the exact mechanisms by which hopelessness may increase the risk of death, according to the study. Hopelessness may lead to biochemical and nervous system abnormalities.

Another explanation could be that "hopeless or pessimistic individuals may be less likely to engage in health-promoting behaviors, such as eating well, exercising, following their doctor's recommendations and taking their medications as prescribed," Stern notes.

"A better understanding of the mechanisms that underlie this phenomenon may help us to extend the duration and improve the quality of our patients' lives," Stern says.

This study was funded by the National Institute on Aging.

Tuesday May 29 1:41 PM ET

### **Hopelessness Linked to Higher Risk of Mortality**

NEW YORK (Reuters Health) - A lack of hope for the future is associated with a higher death rate among older men and women, a team of researchers report. "Our findings confirm and extend the results of previous studies suggesting that, in a US sample comprising older women and men of Mexican and European origin, hopelessness is associated with an increased risk of...mortality," according to Dr. Stephen L. Stern, a psychiatrist at the University of Texas Health Science Center in San Antonio, and colleagues.

The study, which was funded by the National Institutes of Health, was published in the journal *Psychosomatic Medicine*.

The researchers sought to explore whether feelings of hopefulness act as a key to survival and whether those who lack hope are at higher risk of death. From 1992 to 1996, Stern's team asked 795 men and women aged 64 to 79 in San Antonio how they felt about the future and whether or not they were "hopeful about the future." About half of the study participants were European-Americans and half were first, second or third generation Mexican-Americans.

Around 9% of the respondents answered no, they had no hope about the future, while the remaining 91% said that they did have hope about the future.

Mexican-American men were twice as likely to report feeling hopeless as European-American men, with 12% of the Mexican-American men saying they were hopeless compared with only 6% of the European-American men. Men and women were equally likely to report hopelessness.

When tracked an average of 5 years later by reviewing death certificates in 1999, the researchers found that 29% of the people who said they felt hopeless had subsequently died, compared to only 11% of those who said they were hopeful. None of the study participants had committed suicide, but had primarily died from either cancer or from heart disease.

The investigators measured whether depression among people who felt hopeless was responsible for their higher death rate. After adjusting for other risk factors, they found that depression was not associated with mortality. But people who suffered from both depression and hopelessness may be at the greatest risk of mortality, the report indicates.

The researchers theorized that hopeless people might have higher death rates because they may suffer from biochemical abnormalities, such as decreased immune function or abnormal platelet function.

The study was limited in that it only measured hopelessness with a simple yes or no answer, the authors note. It also did not examine the reasons why people said they were hopeless.

Stern and colleagues conclude that because this question may provide relevant information about a patient's risk of death, doctors should consider asking it during a checkup. "Are you hopeful about the future?" might be a useful screening question to include in the evaluation of older patients," they write.

SOURCE: *Psychosomatic Medicine* 2001; Vol. 63, pages 344-351.

## **STUDY #5:**

**What follows is a report of a journal article, then a newspaper story about it.**

### **Psychosocial Predictors of Hypertension in Men and Women**

**[Author Information]** Susan Levenstein, MD; Margot W. Smith, DrPH; George A. Kaplan, PhD

**Background** Psychosocial stressors have been shown to predict hypertension in several cohort studies; patterns of importance, sex differences, and interactions with standard risk factors have not been fully characterized.

**Methods** Among 2357 adults in a population sample of Alameda County, California, free of hypertension in 1974, 637 reported in 1994 having ever used antihypertensive medication (27.9% of the men and 26.3% of the women). The effects of baseline psychosocial, behavioral, and sociodemographic factors on the incidence of treated hypertension were examined using multiple logistic regression. [NOTE TO STAT 8 STUDENTS: This is a type of regression where the response variable is categorical – whether they used antihypertensive medication or not.]

**Results** Low education, African American race, low occupational prestige, worry about job stability, feeling less than very good at one's job, social alienation, and depressive symptoms each had significant ( $P < .05$ ) age-adjusted associations with incident hypertension. Associations were weakened by adjustment for body mass index, alcohol consumption, smoking status, and leisure time physical activity, especially the associations of anomy and depression, which persisted in women but not in men. In multivariate models, job insecurity (odds ratio, 1.6), unemployment (odds ratio, 2.7), and low self-reported job performance (odds ratio, 2.1) remained independent predictors of hypertension in men, whereas low-status work (odds ratio, 1.3) was an independent predictor of hypertension in women.

**Conclusions** In the general population, low occupational status and performance and the threat or reality of unemployment increase the likelihood of developing hypertension, especially among men, independent of demographic and behavioral risk factors. Psychological distress and social alienation may also increase hypertension incidence, especially in women, chiefly through an association with health risk behaviors.

*Archives of Internal Medicine.* 2001; Vol. 161, pages 1341-1346

### **Fear of Layoffs Raise Men's Blood Pressure**

#### **News Article:**

NEW YORK (Reuters Health) - Work-related worries and other psychological stressors can contribute to high blood pressure, but job strain may be particularly hard on men, researchers report.

In a new study, researchers found that besides the traditional risk factors for high blood pressure--such as smoking, inactivity and being overweight--several psychological factors stood out among the 27% of participants who developed high blood pressure over a two decade period.

For men, unemployment, job insecurity and feelings of inadequacy in their job performance were all linked to at least a 50% greater risk of high blood pressure.

Having a "low-status" job was the only work-related factor linked to high blood pressure among women. The women were more likely to be affected by relationship-related feelings such as loneliness--but much

of this association, according to the researchers, was explained by the poorer health habits of these women. The findings are published in the May 28th issue of Archives of Internal Medicine.

The new research suggests that psychological factors affect men and women differently, according to Dr. Susan Levenstein of the Human Population Laboratory in Berkeley, California, and colleagues.

The sex differences in this study may be due to differences in the way men's and women's cardiovascular systems respond to stress, Levenstein's team speculates.

“It may also be conjectured,” they add, “that the threat or reality of unemployment could be particularly devastating for men, for psychological and/or practical reasons.”

The researchers note that other studies have hinted that men may be more sensitive to “work-related threats to their autonomy,” and women to strains in relationships with family and friends.

In the study, the researchers examined 20 years of health and lifestyle data gathered on nearly 2,400 men and women in one California county.

**STUDY #6:****Survival in Academy Award Winning Actors and Actresses****Donald A. Redelmeier, MD; and Sheldon M. Singh, BSc*****Annals of Internal Medicine*, 15 May 2001 Volume 134 Number 10 Pages 955-962**

**Background:** Social status is an important predictor of poor health. Most studies of this issue have focused on the lower echelons of society.

**Objective:** To determine whether the increase in status from winning an academy award is associated with long-term mortality among actors and actresses.

**Design:** Retrospective cohort analysis.

**Setting:** Academy of Motion Picture Arts and Sciences.

**Participants:** All actors and actresses ever nominated for an academy award in a leading or a supporting role were identified (n = 762). For each, another cast member of the same sex who was in the same film and was born in the same era was identified (n = 887).

**Measurements:** Life expectancy and all-cause mortality rates.

**Results:** All 1649 performers were analyzed; the median duration of follow-up time from birth was 66 years, and 772 deaths occurred (primarily from ischemic heart disease and malignant disease). Life expectancy was 3.9 years longer for Academy Award winners than for other, less recognized performers (79.7 vs. 75.8 years; P = 0.003). This difference was equal to a 28% relative reduction in death rates (95% CI, 10% to 42%). Adjustment for birth year, sex, and ethnicity yielded similar results, as did adjustments for birth country, possible name change, age at release of first film, and total films in career. Additional wins were associated with a 22% relative reduction in death rates (CI, 5% to 35%), whereas additional films and additional nominations were not associated with a significant reduction in death rates.

**Conclusion:** The association of high status with increased longevity that prevails in the public also extends to celebrities, contributes to a large survival advantage, and is partially explained by factors related to success.

**STUDY #7:**  
**Effectiveness of St John's Wort in Major Depression**  
**A Randomized Controlled Trial**

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**Context** Extracts of St John's wort are widely used to treat depression. Although more than 2 dozen clinical trials have been conducted with St John's wort, most have significant flaws in design and do not enable meaningful interpretation.

**Objective** To compare the efficacy and safety of a standardized extract of St John's wort with placebo in outpatients with major depression.

**Design and Setting** Randomized, double-blind, placebo-controlled clinical trial conducted between November 1998 and January 2000 in 11 academic medical centers in the United States.

**Participants** Two hundred adult outpatients (mean age, 42.4 years; 67.0% female; 85.9% white) diagnosed as having major depression and having a baseline Hamilton Rating Scale for Depression (HAM-D) score of at least 20.

**Intervention** Participants completed a 1-week, single-blind run-in of placebo, then were randomly assigned to receive either St John's wort extract (n = 98; 900 mg/d for 4 weeks, increased to 1200 mg/d in the absence of an adequate response thereafter) or placebo (n = 102) for 8 weeks.

**Main Outcome Measures** The primary outcome measure was rate of change on the HAM-D over the treatment period. Secondary measures included the Beck Depression Inventory (BDI), Hamilton Rating Scale for Anxiety (HAM-A), the Global Assessment of Function (GAF) scale, and the Clinical Global Impression–Severity and –Improvement scales (CGI-S and CGI-I).

**Results** The random coefficient analyses for the HAM-D, HAM-A, CGI-S, and CGI-I all showed significant effects for time but not for treatment or time-by-treatment interaction (for HAM-D scores,  $P < .001$ ,  $P = .16$ , and  $P = .58$ , respectively). Analysis of covariance showed nonsignificant effects for BDI and GAF scores. The proportion of participants achieving an a priori definition of response did not differ between groups. The number reaching remission of illness was significantly higher with St John's wort than with placebo ( $P = .02$ ), but the rates were very low in the full intention-to-treat analysis (14/98 [14.3%] vs 5/102 [4.9%], respectively). St John's wort was safe and well tolerated. Headache was the only adverse event that occurred with greater frequency with St John's wort than placebo (39/95 [41%] vs 25/100 [25%], respectively).

**Conclusion** In this study, St John's wort was not effective for treatment of major depression.

*Journal of the American Medical Association*, 2001; Vol. 285, pages 1978-1986