

Occupational status of adult survivors of childhood cancer: A report from the Childhood Cancer Survivor Study

Anne C. Kirchoff^{1,2}; Kevin R. Krull³; Kirsten K. Ness³; Elyse R. Park⁴; Debra L. Friedman⁵; Gregory T. Armstrong³; Marilyn Stovall⁶; Kevin C. Oeffinger⁷; Melissa Hudson³; Leslie L. Robison³, Wendy Leisenring¹

¹Fred Hutchinson Cancer Research Center, Seattle, WA

²University of Washington Department of Health Services, Seattle, WA

³St. Jude Children's Research Hospital, Memphis, TN

⁴Harvard Medical School, Boston, MA

⁵Vanderbilt-Ingram Cancer Center, Nashville TN

⁶The University of Texas M. D. Anderson Cancer Center, Houston, TX

⁷Memorial Sloan-Kettering Cancer Center, New York, NY

Limit: 2300 characters

Purpose: To examine whether adult survivors from the Childhood Cancer Survivor Study (CCSS) were less likely to be employed in higher-paid, higher-skilled professional occupations than their siblings. **Methods:** Four mutually-exclusive occupational outcome groupings were created for participants ages ≥ 25 years: Professional, Non-Physical, Physical and Unemployed. Occupational groupings were based on the Standard Occupational Classification System and considered the skills, education and physical activity needed to perform specific jobs. Occupations among employed survivors (N=5070) and siblings (N=1799) were examined in multivariable generalized linear models. We also performed multinomial logistic regressions, expanding the sample to include unemployed (total sample survivors N=6671, siblings N=2129). **Results:** Employed survivors were working in Professional jobs less often than siblings (Relative Risk 0.92, 95% Confidence Interval [95% CI] 0.87-0.96). Report of jobs requiring physical work did not differ between survivors and siblings. Employed survivors who had a history of cranial radiation doses ≥ 18 Gy were approximately 50% less likely to be in Professional occupations (P<0.01) than survivors without cranial radiation. CNS tumor resection survivors (Odds Ratio 0.67, 95% CI 0.54-0.84) were less likely to hold Professional occupations. In the multinomial analyses that included unemployment as a potential outcome, a significantly lower proportion of female survivors reported Professional occupations (34%) compared to male survivors (43%) and female (47%) and male (52%) siblings (P<0.001). The proportion of survivors employed in Professional occupations with household income $> \$80,000$ per year was lower than for siblings (survivors=38%, 95% CI 36%-40% vs. siblings=46%, 95% CI 44%-49%) after adjusting for demographics including education and marital status. **Conclusions:** Adult survivors of childhood cancer are less often employed in professional jobs than siblings. Survivors with certain treatment histories are at higher risk. These occupational disparities suggest that information on employment rights and provision of vocational assistance may be needed throughout adulthood for this population.