

# Survivors of Childhood Cancer and Comparison Peers: The Influence of Peer Factors on Later Externalizing Behavior in Emerging Adulthood

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## Introduction

The five-year survival rate for childhood cancer is reported to exceed 75 percent, and among young adults, an estimated 1 in 640 are survivors of childhood cancer. Although these children survived cancer, they are not immune to the later effects often caused by cancer or its treatment, such as organ damage, functional impairment, secondary malignancies and lower overall quality of life.

Adolescence is a time of change, often accompanied by testing boundaries, such as breaking rules and experimenting with substance use. Prior research has reported conflicting outcomes on whether childhood cancer survivors are more prone to externalizing behavior and substance use. In this longitudinal study, researchers used standardized measures and multiple informants to examine differences in externalizing behavior and substance use among childhood cancer survivors and comparison peers during adolescence. The roles of peer acceptance, social behavior and medical factors were of focus.

## Key Findings from Study

- Cancer survivors and peers exhibited similar externalizing behaviors and substance use at follow-up. However, cancer survivors were less likely to use marijuana.
- Substance use was associated with earlier peer acceptance and social behavior in both groups.
- Unlike previous research, peer acceptance and social behavior did not predict later externalizing behavior.
- Survivors who were older at diagnosis were at greater risk for later externalizing behavior and substance use.

## Research Method

- Research subjects initially were identified through a cancer registry at a large children's hospital. Eligibility requirements included: 8- to 15-years-old, on treatment for cancer not primarily involving the central nervous system, in school without full-time special education, living within 50 miles of the hospital, and English speaking.

- The study was organized in three phases:
  - o Phase 1 was a classroom study where peer relationships data was obtained and potential comparison peers were identified;
  - o Phase 2 consisted of home visits with the participating children with cancer and comparison peers during the summer following the classroom assessment;
  - o Phase 3 included a follow-up home visit soon after the child turned 18.
- Phase 1 consisted of 100 families in the school assessment for both the experimental and comparison groups. For the comparison sample, each peer was matched by race, gender and age from the class roster. The measures used were Peer Acceptance Ratings, Best Friend Nominations and Revised Class Play.
- Phase 2 was comprised of 95 subjects in the initial home visit, with 98 in the comparison group. Measures used included a demographic questionnaire, Child Behavior Checklist and Treatment Severity.
- Phase 3 included subjects who had turned 18 (n=56 survivors and n=60 comparison peers). Data from available parents was also collected. The average time between assessments was 5.9 years. Follow-up assessment measures were a demographic questionnaire, the Child Behavior Checklist, Antisocial Behavior Checklist, a drinking and drug history and ratings of severity of late effects.

**For more information, please contact the Center for Biobehavioral Health in The Research Institute at Nationwide Children's Hospital at 614-722-3182 [www.NationwideChildrens.org/Research](http://www.NationwideChildrens.org/Research)**

*\*Thompson, AL, Gerhardt, CA, Miller, KS, Vannatta, K, & Noll, RB. Survivors of childhood cancer and comparison peers: The influence of peer factors on later externalizing behavior in emerging adulthood. J Pediatr Psychol, 2009.*

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