

Personal Adjustment of Young Adult Survivors of Leukemia/Lymphoma: Examining the Association with Cognition and Sex



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BACKGROUND

Treatment advances have increased survival rates for pediatric acute lymphoblastic leukemia (ALL) and non-Hodgkin's lymphoma (NHL). However, survivors are at risk of late effects of such treatments, including cognitive sequelae and psychosocial distress, with females potentially being at greater risk than males.¹ Working memory, processing speed, and sustained attention deficits can persist long after treatment completion, which may interfere with adjustment during the transition to adulthood.^{2,3} The objectives of this study, therefore, were to (1) describe self-perceptions of personal adjustment in young adult survivors of pediatric ALL and NHL and (2) examine the associations between personal adjustment, cognition, and sex.

METHODS

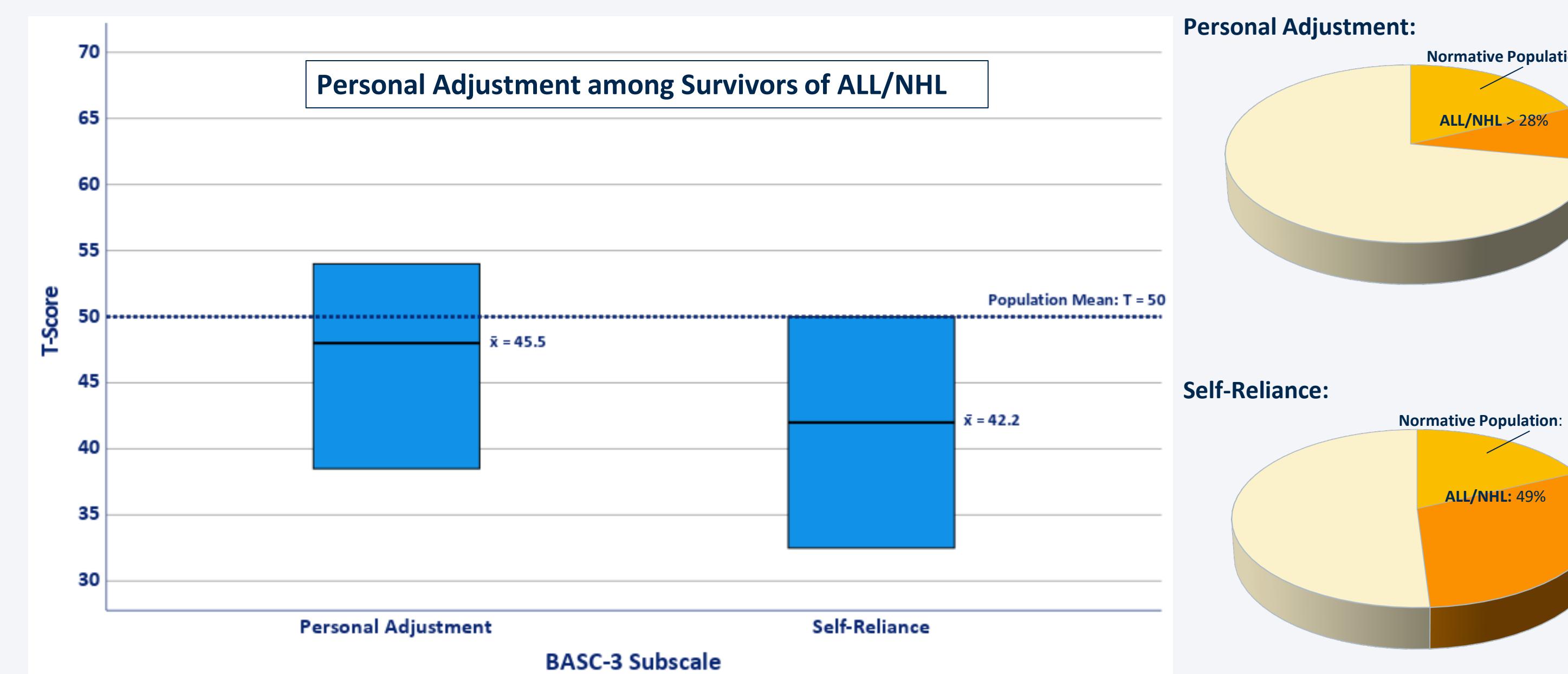
Participants: Thirty-five young adult (range: 18-21 years; mean = 19.4 years; 60% male), primarily Latino, survivors of ALL/NHL referred for neuropsychological evaluation by their medical team.

Measures: Domains assessed included **working memory** (*Wechsler Adult Intelligence Scale–Fourth Edition* [WAIS-IV] Digit Span [DS])⁴, **processing speed** (*Symbol Digit Modalities Test*⁵/ WAIS-IV Coding), and **attention** (*Conners Continuous Performance Test–Third Edition*).⁶ **Personal adjustment** was measured using the *Behavior Assessment System for Children-Third Edition* (BASC-3).⁷

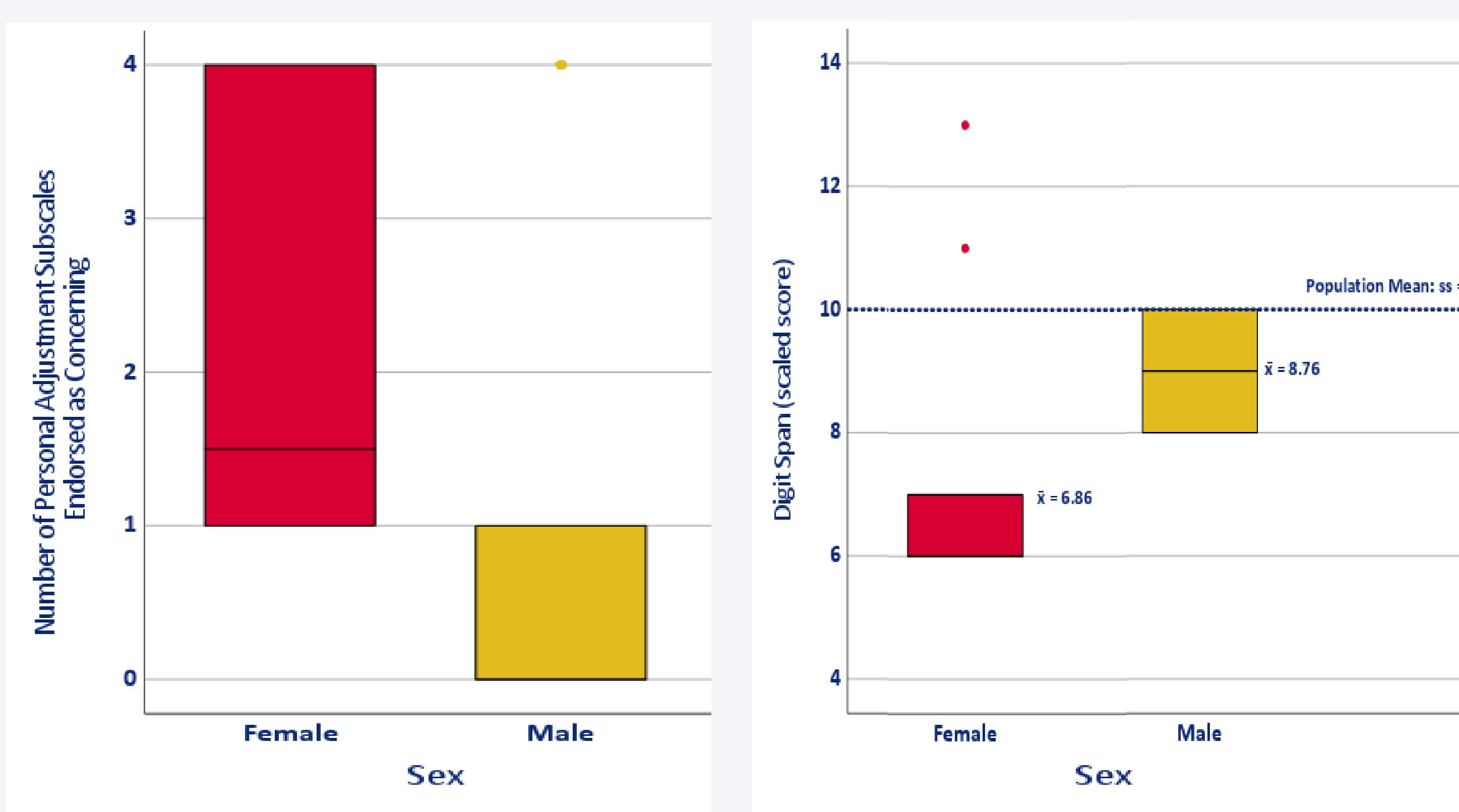
Statistical Analysis: Multiple regression analyses examined the predictive relationship between cognitive measures and self-reported adjustment. Independent sample t-tests determined sex differences in number of elevated personal adjustment scales.

RESULTS

Personal adjustment was approximately 0.5 standard deviations below normative expectations (mean T=45.5), with **over 28% of the sample endorsing concerns in this area** (compared to 18% of the normative population). **Self-reliance was the lowest personal adjustment subscale** (mean T=42.2), with **nearly half (49%) endorsing concerns** (compared to 15-21% of the normative population).



There were no significant associations between cognitive measures and personal adjustment subscales. **Females endorsed a higher number of elevated personal adjustment subscales compared to males**, $t(33)=1.99$, $p=.027$, which parallels their **poorer working memory performance**, $t(36)=-2.14$; $p=.02$.



Conclusions

Young adult survivors of ALL/NHL are at **greater risk of concerns regarding personal adjustment than peers**. This is particularly true of the subdomain of *self-reliance*, which is defined as confidence in one's ability to solve problems and to be dependable and decisive. While there does not appear to be a direct relationship between cognition and personal adjustment in this group, **females reported more areas of concern and demonstrated worse working memory**, confirming their particular vulnerability to long-term cognitive and psychosocial sequelae. Further research into the relationship between medical, demographic, and cognitive factors and personal adjustment in this population is needed in order to understand how to best support patients as they transition to adult-centered care.

REFERENCES

