

A population-based study comparing comorbid conditions and mental distress among Hispanic Adolescent and Young Adult cancer survivors to propensity score matched controls

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BACKGROUND & PURPOSE

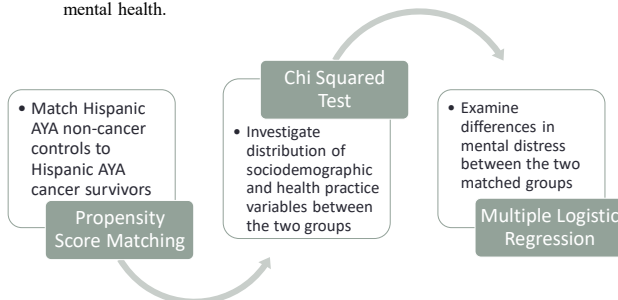
- The adolescent and young adult (AYA) age range is key for psychosocial development: therefore, the addition of a cancer diagnosis may cause AYA cancer survivors to face higher levels of psychosocial distress.
- AYAs in minority populations may face higher psychosocial distress and poorer health-related quality of life (HRQoL).
- Risky health practices, such as alcohol use, and chronic health conditions can also lead to poorer mental health.
- Few studies assess the impact of both a cancer diagnosis and risky health practices on Hispanic AYA's mental health and HRQoL.

Purpose:

The aim of this study is to investigate the health practices, comorbid conditions, and mental distress among Hispanic AYA cancer survivors in comparison with Hispanic AYAs without a history of cancer in order to develop targeted psychosocial interventions.

METHODS

- Cross-sectional, matched case-control design** using population data from the **National Health Interview Survey (NHIS) 2009-2018**.
- Kessler nonspecific psychological distress scale (K6)** was used to identify mental distress.
 - 6-item K6 scale asks respondents how frequently within the past 30 days they felt: nervous, hopeless, restless, worthless, sad, and that everything was an effort.
 - Total score ranges between 6 to 30, with lower scores indicating worse mental health.



The statistical analysis was conducted using MatchIT package in R (version 4.3.2) and SPSS version 26.0. A value of $p < 0.05$ was considered statistically significant.

FINDINGS

Table 1: Demographic Characteristics of Hispanic AYA cancer survivors and controls

| | Controls n = 295 | | AYA Cancer Survivors n = 295 | | p |
|----------------------------------|---------------------|-------|---------------------------------|-------|-------|
| | n | % | n | % | |
| Sociodemographic Factors | | | | | |
| Age at survey (mean, SD) | 40.91 | 13.18 | 40.57 | 11.53 | 0.737 |
| Age at diagnosis (mean, SD) | | | 28.72 | 6.49 | |
| 15-19 | | | 23 | 7.8 | |
| 20-29 | | | 128 | 43.3 | |
| 30-39 | | | 144 | 48.8 | |
| Marital Status | | | | | |
| Married or living with partner | 143 | 48.5 | 143 | 48.5 | 0.993 |
| Divorced/separated/widowed | 90 | 30.5 | 91 | 30.8 | |
| Never married | | | | | |
| Education | | | | | |
| No diploma/less than high school | 41 | 13.9 | 46 | 15.6 | 0.43 |
| High school graduate or GED | 65 | 22 | 67 | 22.7 | |
| Some college or associates | 136 | 46.1 | 115 | 39 | |
| Bachelors degree | 34 | 11.5 | 45 | 15.3 | |
| Masters degree or higher | 19 | 6.4 | 22 | 7.5 | |
| Annual Income | | | | | |
| < \$25,000 | 152 | 51.5 | 150 | 50.8 | |
| \$25,000-\$44,999 | 83 | 28.1 | 74 | 25.1 | |
| ≥ \$45,000 | 60 | 20.3 | 71 | 24.1 | |
| Insurance | | | | | |
| Covered | 218 | 73.9 | 221 | 74.9 | |
| Not covered | 77 | 26.1 | 74 | 25.1 | |

* indicates statistical significance

Table 2: Psychosocial health, co-morbidities, and health practices of Hispanic AYA cancer survivors and controls

| | Controls n = 295 | | AYA Cancer Survivors n = 295 | | p |
|--|---------------------|------|---------------------------------|------|---------|
| | n | % | n | % | |
| Health Practices and Co-morbidities | | | | | |
| Co-morbid conditions | 0.66 | 0.92 | 1.08 | .131 | <0.001* |
| None | 163 | 55.3 | 123 | 41.7 | <0.001* |
| 1 | 91 | 30.8 | 89 | 30.2 | |
| 2 or more | 41 | 13.9 | 83 | 28.1 | |
| Alcohol Status | | | | | |
| Lifetime abstainer | 55 | 19 | 54 | 18.5 | 0.053 |
| Former | 29 | 10 | 49 | 16.8 | |
| Current | 206 | 71 | 189 | 64.7 | |
| Average K6 Score (mean, SD) | 26.9 | 4.2 | 25.9 | 5.3 | <0.001* |

* indicates statistical significance

Table 3: Multiple Regression Analyses of Variables Impacting Levels of Mental Distress

| Variables | Unstandardized B (SE) | Beta | p |
|--------------------------------|-----------------------|-------|--------|
| AYA cancer survivor | 0.898 (0.402) | 0.094 | 0.026* |
| Number of co-morbid conditions | 0.509 (0.173) | 0.124 | 0.003* |
| Alcohol status | 0.158 (0.419) | 0.016 | 0.706 |

Regression Model $F(3, 570) = 5.59, p < .001$

* indicates statistical significance

RESULTS

- Hispanic AYA cancer survivors and controls were matched on survey year, age at diagnosis, sex, education, income level, insurance status, and marital status.
- Sociodemographic variables, such as age, marital status, and education, were found to be comparable between two groups after matching (Table 1).
- Hispanic AYA cancer survivors reported more comorbid conditions than their healthy controls (Table 2).**
- Drinking status was not found to be significantly different between Hispanic AYA cancer survivors and controls (Table 2).
- AYA cancer survivors and co-morbidities were significant predictors of higher mental distress, unlike alcohol status (Table 3).
- Hispanic AYA cancer survivors reported poorer psychosocial health than matched controls ($b = -0.898, t = -2.236, p = 0.026$) (Table 3).**

CONCLUSION

The results indicate that Hispanic AYA cancer survivors have poorer mental health outcomes compared to their matched healthy controls. Furthermore, Hispanic AYA cancer survivors have higher prevalence of comorbid conditions. **These results indicate that tailored surveillance and the creation of targeted psychosocial intervention programs may improve mental health outcomes of Hispanic AYA cancer survivors.**

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