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Financial Burden and Mental Health Outcomes in Younger Cancer Survivors

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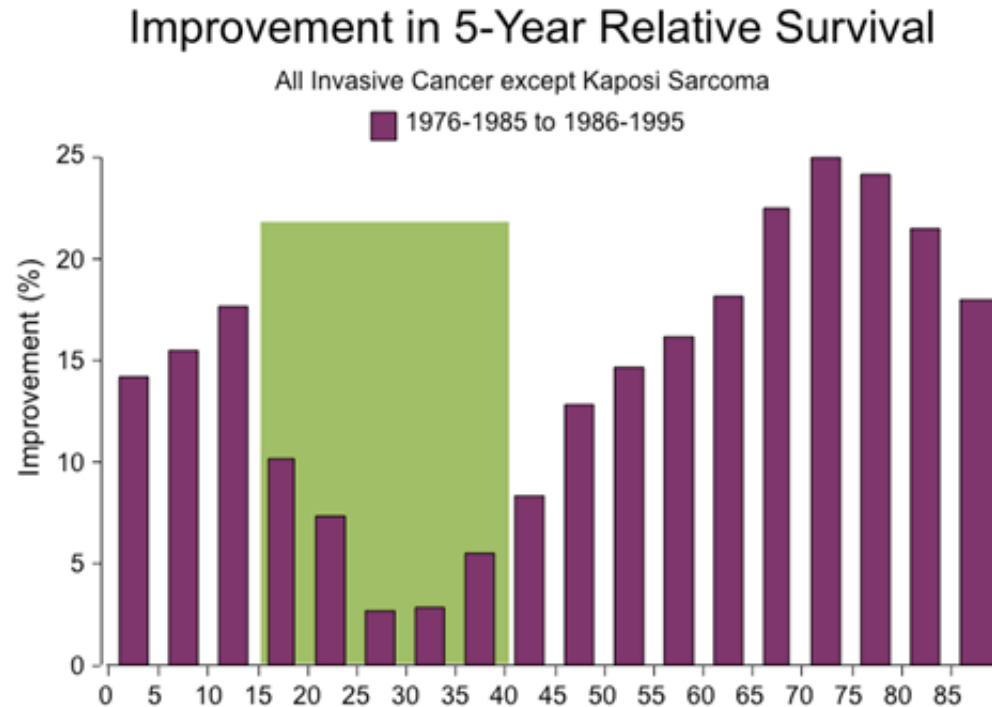
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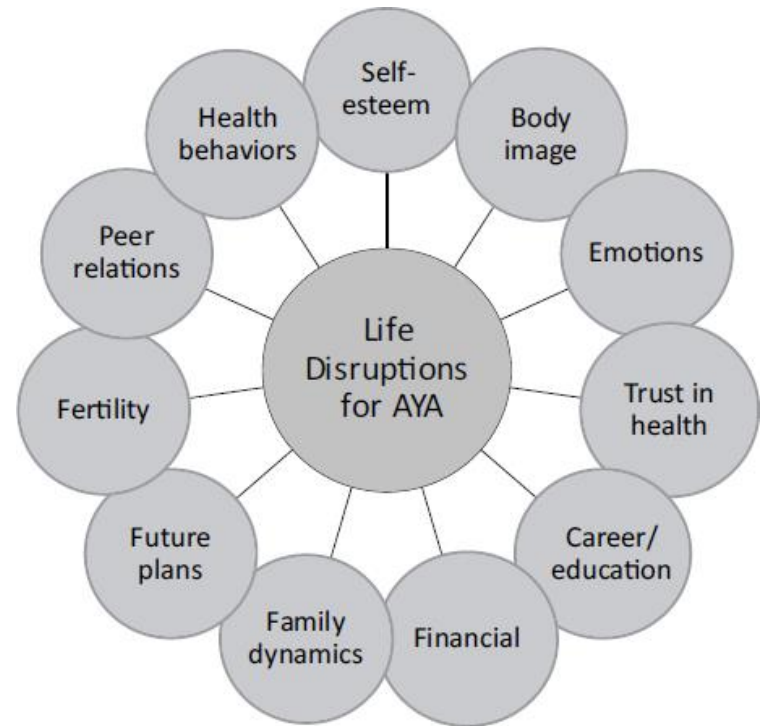
Perspective



- There has been a lack of improvement in 5-year relative survival among older adolescents and younger adults (AYA) relative to all other ages.

Uniqueness of the AYA Cancer Population

- The lack of improvement is attributed to life disruptions unique to this population.
- Rates of depression and other psychological disorders are substantially higher in this group with cancer when compared with older adults.
- In addition to problems with mental health, this population experiences increased levels of financial burden due to:
 - Increased time off from work.
 - Delayed entry into workforce.



Institute of Medicine. Identifying and address the Needs of Adolescents and Young Adults with Cancer

Current Study Aim

- To identify associations between mental health, employment, income, and insurance status among individuals age 18-49 following completion of active treatment.

Participants and Procedures

- Cancer survivors (n=340) were recruited and enrolled as part of the Measuring Your Health Study (MY-HEALTH) by 4 SEER cancer registries in 3 states (CA, LA and NJ) between 2011-2013.
 - 18-49 years at diagnosis.
 - Non-Hodgkins lymphoma, breast, prostate, colorectal, non-small cell lung and gynecologic cancers.
 - Filled out a survey 6-13 months post diagnosis.
 - All participants had completed treatment at the time of participation.

Study Variables

- Main outcome measures
 - PROMIS depression (10-items).
- Financial burden
 - Self-reported financial burden measured by PSQ-III 4-item subscale.
 - Example
 - “I worry sometimes about having to pay large medical bills”.
 - Among participants aged 18-49, 25% strongly agree with this statement (65 and older: 15.1%).

Study Variables

- Education
 - High school graduate or less
 - College graduate or higher
- Employment
 - Working: full-time and part-time employment.
 - Not working: unemployed, disabled, retired, student.
- Insurance
 - Private
 - Government
 - None
- Income
 - Above \$60,000 per year
 - Below \$60,000 per year

Results

- Younger adult cancer survivors reported higher depression than the average U.S. population (mean= 52.1), with 11% reported clinically meaningful scores (Moderate or higher: ≥ 65).
- Over half (53%) reported being worried about paying large medical bills.

Results

	N	Column %	Estimate	Standard Estimate	P-Value
Cancer site					0.96
1. Cervix	39	11.5	-0.23	-0.01	
2. Colorectal	34	10	0.47	0.01	
3. Non-Hodgkins Lymphoma	59	17.4	-1.31	-0.04	
4. Uterus	28	8.2	-0.24	-0.01	
5. Breast (ref)	173	50.9			
6. Lung	7	2.1			
Stage at Diagnosis					0.9
1. Stage I (ref)	133	39.1			
2. Stage II	105	30.9	0.67	0.03	
3. Stage III	55	16.2	-0.87	-0.03	
4. Stage IV	35	10.3	-0.66	-0.02	
0. Other	12	3.5			

Results

	N	Column %	Estimate	Standard Estimate	P-value
Race/Ethnicity					0.7
1. White (ref)	106	31.2			
2. Hispanic	99	29.1	0.7	0.03	
3. Asian	65	19.1	-1.7	-0.06	
4. Black	54	15.9	-0.8	-0.03	
5. All other	16	4.7			
Insurance					0.10
1. No insurance	17	5.0	5.91	0.12	
2. Government	88	25.9	-0.80	-0.03	
3. Private (ref)	214	62.9			

Results

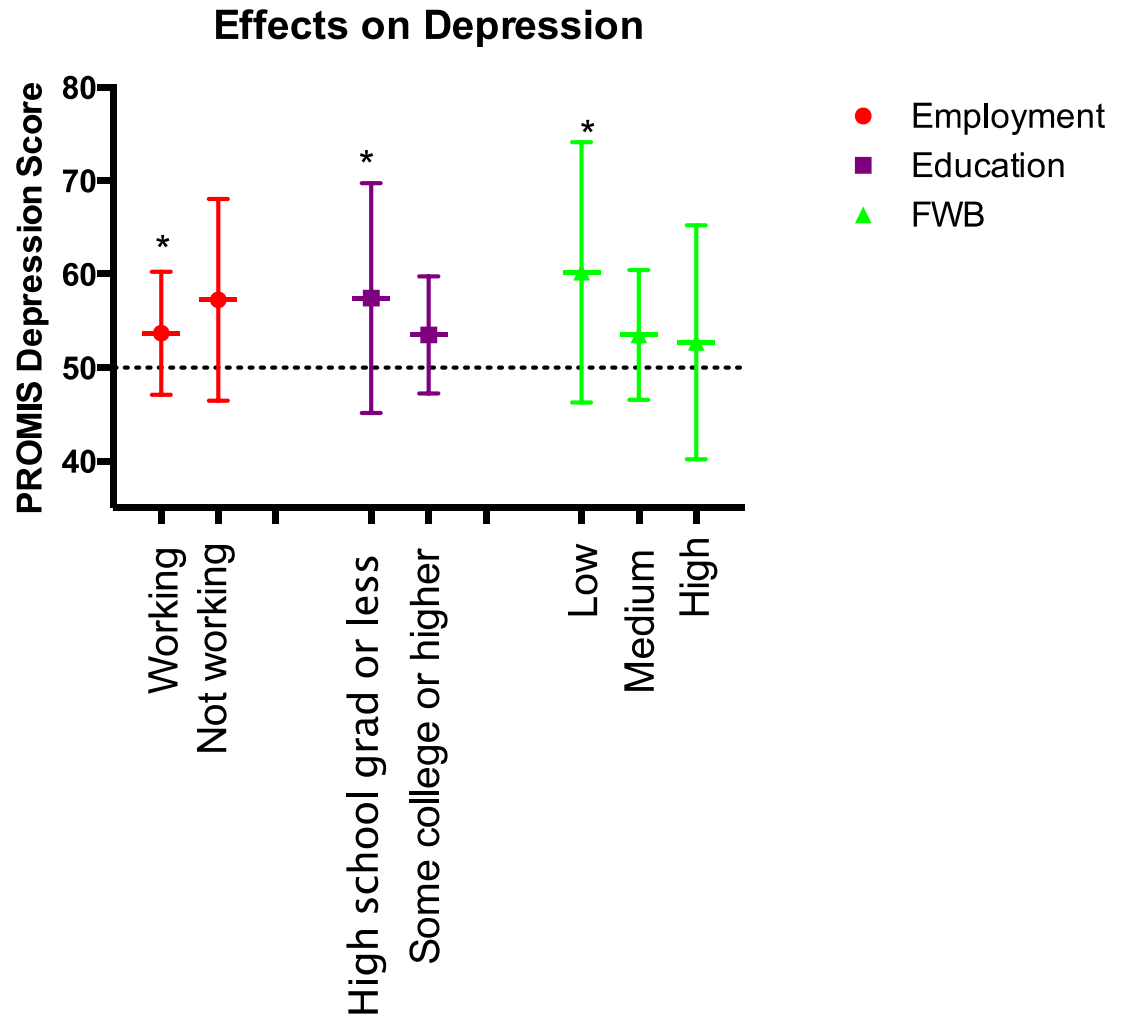
	N	Column %	Estimate	Standard Estimate	P-value
Employment					0.02
1. Working	233	68.5	-3.6	-0.14	
2. Not working (ref)	100	29.4			
Education					0.03
1. High school grad or less	78	22.9	3.9	0.14	
2. Some college or higher (ref)	256	75.3			
Financial well-being (FWB)					0.0004
1. Low	67	19.7	7.5	0.27	
2. Medium	209	61.5	0.8	0.03	
3. High (ref)	64	18.8			

Results

	N	Col %	Estimate	Standardized Estimate	P-value
Income					0.23
1. Less than 60k	157	46.2	2.2	0.10	
2. More than 60k (ref)	140	41.2			

Results

- Higher scores = worse scores.
- A score of 50 is the average for the U.S. population



Discussion

- Our findings highlight a strong association between financial burden and mental health for younger cancer survivors, regardless of cancer type or stage.
- Distress over paying for treatment was common and strongly associated with high levels of depression.
- Income was not associated with depression when all other variables were controlled for.
- No difference found between full-time and part-time employment and their association with depression.
- Cancer type and stage alone were not significantly associated with depression levels.

Discussion

- There have been studies that link financial burden to depression and anxiety, but few have studied this specific relationship within a representative sample in the United States.
 - Even fewer have studied this linkage within the younger cancer population.
- Our study looks at this relationship more closely to identify what factors of financial burden most highly effect depression levels.

Conclusions

- We found that it was more the perception of not being able to pay for medical bills that was strongly linked with depression, and not whether individuals could actually pay their bills.
- Study participants had finished treatment, and they still reported high levels of perceived stress regarding their ability to pay for cancer related costs.

Implications

- Our results show that educating members of this population about their financial options can go a long way in improving levels of depression.
- Mental health interventions could benefit from incorporating this information about financial well-being into their programs.

Thank you

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