

Discriminatory Power of a 15-Item Distress Screening Tool Among Those at Risk for Depression: Implications for Triage Post Distress Screening

Buzaglo J.S., PhD, Miller, M.F., PhD, MPH, Golant, M., PhD, Longacre, M.L., PhD, Kennedy, V., LCSW
Cancer Support Community, Washington, DC, USA

Introduction

The ACOS Commission on Cancer and the NCCN recommend distress screening for all cancer patients. Doing so is essential for the patient but not without burden to clinicians already taxed with meeting the needs of a growing population of cancer survivors. Cancer patients with depression represent a vulnerable population at risk for poorer quality of life and overall health outcomes. Streamlining the screening process in an evidence-based manner for those identified at risk for depression can contribute to improving patient-centered care.

Objective

Our objectives were to facilitate triage post screening by describing those who triggered a positive result for "Risk for Depression" on a distress screening tool and exploring those concerns most highly associated with a heightened risk for depression.

Methods

- Patients of a community-based cancer support organization completed CancerSupportSource® a web-based distress screening tool.¹
- They rated 15 items according to the question, "Today, how concerned are you about...?" using a Likert scale (0 not at all to 4 very seriously), including a 4-item depression subscale (summed with a range 0-16). A score ≥ 6 triggered a positive result for "Risk for Depression."
- An **overall distress score** was calculated as the count of distress items rated ≥ 2 (range 0-15).
- Participants who triggered a positive result for depression were then categorized using the overall distress score as high scorers (≥ 13 , n=91) and low scorers (<9, n=105).
- The **item discrimination index (IDI)** was calculated for each distress item as the percent difference in concerned (≥ 2) responses between high and low scorers.

¹ Buzaglo et al. 2014. CancerSupportSource (CSS): Validating a 13-item web-based distress screening tool in the Community. National Comprehensive Cancer Network 2014 Annual Conference.

Table 1. Sample characteristics of patients of a community-based cancer support organization completing a web-based distress screening tool.

Characteristic	n=905
Female	78%
Race/Ethnicity	73% White 10% Latino 9% Black
Income <\$40K	64%
Type of cancer	41% Breast 5% Lung 6% Colorectal
Time since diagnosis	61% <1 year 39% ≥ 1 year
Age (median)	57 years

Results

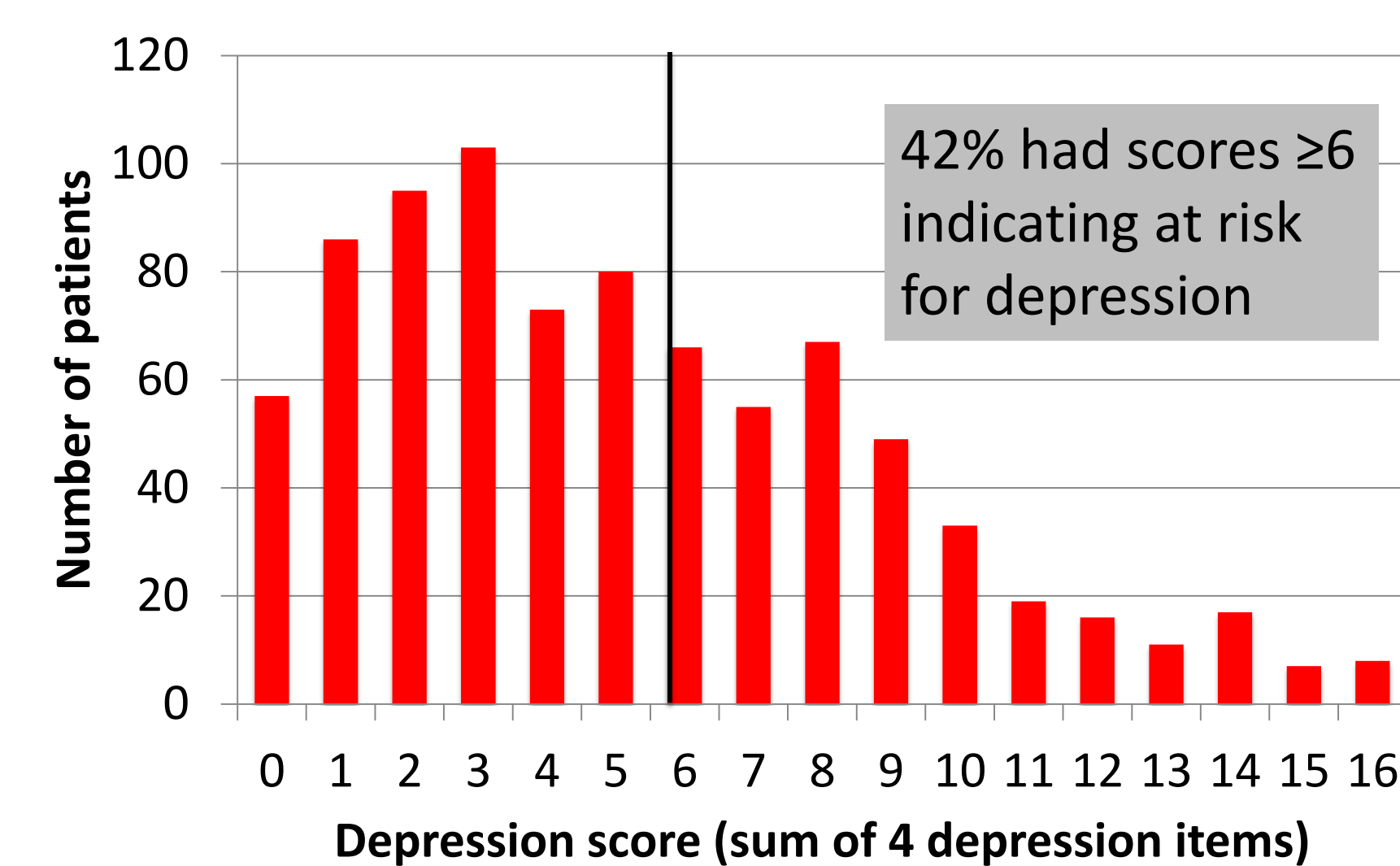


Figure 1. Absolute frequencies of depression scores for 842 patients of a community-based cancer support organization.

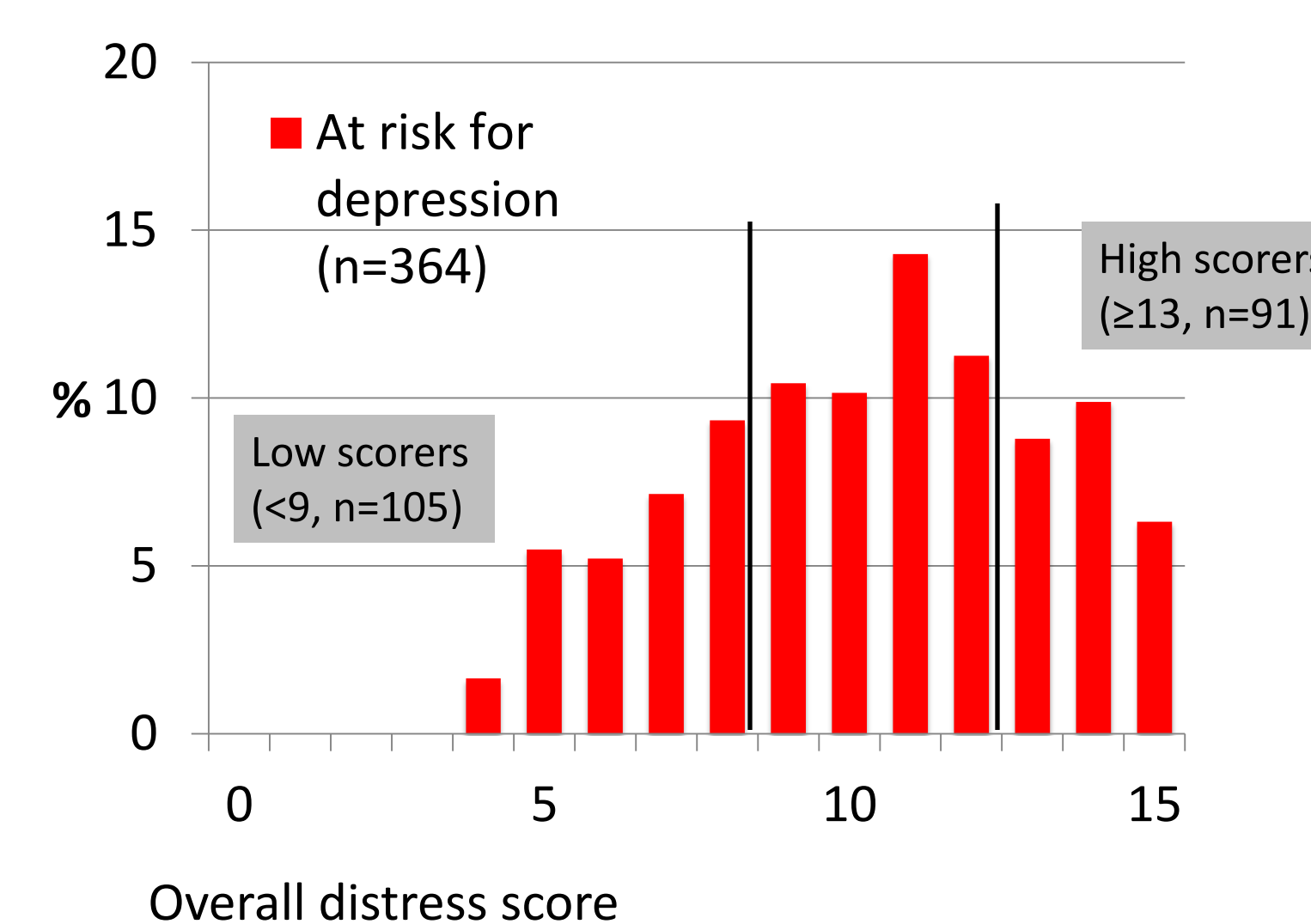
Table 2. Factors associated with risk for depression from regression analysis among patients of a community-based cancer support organization (n=794).

	n	Adjusted odds ratio	95% confidence interval
Ethnicity			
White	629	Reference	--
Black	79	0.87	0.51, 1.5
Latino*	85	1.8	1.1, 3.0
Asian	30	1.4	0.64, 3.0
Other*	82	1.9	1.1, 3.4
Income			
\$100K+	134	Reference	--
\$60-99.9K	147	1.2	0.69, 2.0
\$40-59.9K	117	1.5	0.85, 2.5
<\$40K*	240	2.0	1.3, 3.2
Time since dx			
<1 year	507	Reference	--
1-4.9 years*	225	0.65	0.46, 0.92
≥ 5 years	106	1.0	0.67, 1.6
Retired			
No	670	Reference	--
Yes*	200	0.52	0.35, 0.75

*p <.05

Figure 2. Relative frequencies of overall distress score (i.e., number of concerns rated ≥ 2) for patients at risk for depression.

Participants at risk for depression were then categorized using the overall distress score as high scorers (≥ 13 , n=91) and low scorers (<9, n=105)



Item	Concerned (%)		IDI
	High scorers	Low scorers	
Pain; physical discomfort	96	24	0.72
Making a tx decision	91	20	0.72
Finding meaning	97	26	0.71
Body image	90	27	0.64
Insurance, money	92	30	0.62
Feeling irritable or angry	87	32	0.55
Worry about family, friends	93	39	0.55
Physical activity	97	42	0.55
Sleep problems	87	38	0.49
Feeling too tired	97	52	0.45
Feeling lonely or isolated	90	55	0.35
Disruptions in work, home	95	61	0.34
Feeling nervous or afraid	93	67	0.26
Feeling sad or depressed	99	74	0.25
Worrying about the future	99	85	0.14

Table 3. Proportion of higher scorers and low scorers who rated they were moderately to very seriously concerned and item discrimination index for 15 items from the distress screening tool among participants at risk for depression (n=364).

Among those at risk for depression, distress items with the greatest discriminatory power were:

- pain
- making a treatment decision
- finding meaning or purpose.

For example, 96% of those at risk for depression with overall high distress rated "pain" a concern versus only 24% of those at risk for depression with lower overall distress.

Conclusion

For cancer patients/survivors at risk for depression, pain, making a treatment decision, and finding meaning or purpose are the predictors of overall distress with the greatest discriminatory power.

These findings have important clinical implications for triage post distress screening, including assessing these predictors and providing referral for:

- Pain management
- Treatment decision support
- Support referral (e.g., support groups, spiritual guidance)

Compared to White patients/survivors, we found that Latinos were at significantly greater risk for depression. Those with household incomes less than \$40,000 were also at greater risk for depression vs. those with household incomes at \$100,000 or more.

Future research should address the implementation of effective clinical tools to identify and address the needs of those at greatest risk for depression and overall distress.