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Introduction

- The Cancer Support Community (CSC) represents a global network of nonprofit, community-based organizations that provide professionally led support and education to cancer patients and their families.
- The Institute of Medicine (IOM), NCCN and the American College of Surgeons have recognized that screening for psychosocial distress is critical to ensuring quality cancer care for the whole patient.
- Few validated tools are available for screening Spanish speakers for cancer related distress.
- CancerSupportSource (CSS)** is an evidence-based (Miller et al., 2012, Buzaglo et al., 2013, Gayer et al., 2013), web-based distress screening program.
- CSS was translated into Spanish by *Einstein-Montefiore Institute for Clinical & Translational Research* to create CSS-Spanish (CSS-Sp).
- A 25-item version of CSS-Spanish (CSS Sp-25) has been validated (Gayer et al., 2014*) in the community setting. * Accepted for poster presentation at 2014 Society of Behavioral Medicine Annual Conference, April, 23-26, Philadelphia, PA
- The purpose of this study was to test the psychometric properties of a shorter 15-item version of CSS-Spanish (CSS-Sp-15), including a 4-item depression subscale, among a community-based sample of Spanish-speaking cancer survivors.

Key Features of Cancer Support Source (CSS):

- CSS was developed based on the seven key areas of psychosocial need identified by the Institute of Medicine (2008).
- CSS can be completed at home or in the clinic using a computer or touch screen tablet.
- CSS asks the patient to rate 15 concerns and indicate the type of help (print information, online or talk with a staff member) they desire for each concern.
- CSS integrates a valid and reliable self-report measure with automated reports and linkages to vital information and referral for support services (Buzaglo et al., 2013).
- Two summary reports are produced based on the patient's responses to CSS:
 - The **patient summary report** is automatically generated and provides patients with referrals for in-house, online and community support services and resource fact sheets.
 - The **clinician summary report** includes a summary of the patient's results, red flags and actionable clinical alerts and is sent directly to the health care team and incorporated into the electronic medical record.
- CSS takes less than 10 minutes (on average) for a patient to complete.
- To date, over 1,000 cancer patients have completed the distress screening program.

Sample Characteristics (N=182)

Convenience sample of 182 Spanish-speaking cancer survivors from 6 CSC affiliate sites nationwide including:

- Chicago, IL
- Miami, FL
- New York, NY
- Pasadena, CA
- Quad Cities, IA
- Valley, Ventura, and Santa Barbara, CA

Characteristic	Proportion
Race	
Caucasian	64.4%
Sex	
Female	91.0%
Education	
Less than high school	22.5%
High school or GED	29.7%
Some college/vocational school	20.9%
College degree and above	20.3%
Employment Status	
Employed at least part time	36.0%
Not employed, but looking	15.7%
Disability	10.5%
	Median
Age (20-90 years)	54

Results

Figure 1. Top five rated concerns in CSS-Sp-15

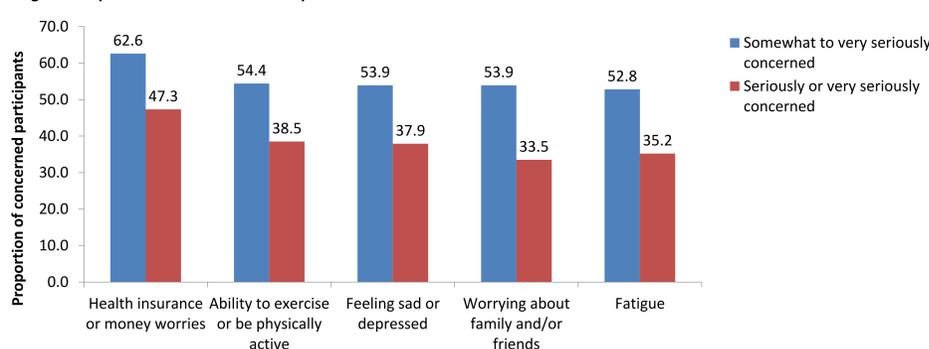


Table 2. Correlations (R²) between CSS-Sp-15, CSS-Sp-25 and the FACT-G, CES-D, and DT in cancer survivors

	FACT-G	CES-D	DT
Summary Scores			
CSS-Sp-25 sum of problem ratings	0.32	0.46	0.22
CSS-Sp-15 sum of problem ratings	0.35	0.46	0.24
Depression subscale (sad, nervous, lonely, fatigue)	0.37	0.50	0.22

Note: Exact wording of items in depression subscale was as follows: 1. feeling sad or depressed; 2. feeling nervous or afraid; 3. feeling lonely or isolated; 4. feeling too tired to do the things you need or want to do

Additional Results

- CSS-Sp-15 demonstrated high internal reliability (Cronbach's alpha=0.94).
- The median distress score (sum of 15 item ratings) was 23 with 64% indicating scores at or above 17 and correlated moderately with the FACT-G, CES-D and DT, indicating moderate concurrent validity.
- The correlation with "gold standard" measures was approximately equivalent for CSS-Sp-15 and CSS-Sp-25.
- The Area Under the Curve (AUC) is 0.85, indicating that CSS has a good overall accuracy to detect risk for depression relative to the CES-D.

Methods

- Spanish-speaking participants completed a paper-and-pen survey including CSS-Sp-25, the Functional Assessment of Cancer Therapy – General well-being scale (FACT-G), the Center for Epidemiologic Studies Depression Scale (CES-D), and the Distress Thermometer (DT).
- Internal reliability was estimated using Cronbach's alpha coefficient.
- Concurrent validity was determined by correlations with the FACT-G, CES-D and DT.
- A non-parametric analysis of variance was used to establish discriminant validity.
- Receiver operating characteristic (ROC) curve analysis using the CES-D (≥21) as the criterion was used to explore the effect on sensitivity and specificity if the sum of 4 problem ratings was ≥7 on the CSS-Sp-15 depression subscale.

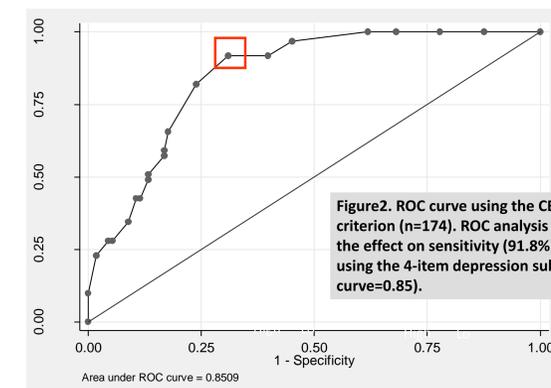


Figure 2. ROC curve using the CES-D (≥21) as the criterion (n=174). ROC analysis was used to explore the effect on sensitivity (91.8%) and specificity (69%) using the 4-item depression subscale (area under curve=0.85).

Table 3. Sensitivity and specificity of CSS-Sp-15 and CSS-Sp-25

CSS-Sp-15 Score	CSS-Sp-25 Score		Total
	< 28	≥ 28	
< 17	61	4	65
≥ 17	3	113	116
Total	64	113	116

In ROC analysis, a score ≥17 on the CSS-Sp-15 has a true positive rate (sensitivity) of 97% and false positive rate (1-specificity) of 5% compared to a score ≥28 on the CSS-Sp-25 (AUC=0.99).

Conclusion and Future Directions

- CSS-Sp-15 showed moderate to strong psychometric properties and can be a valuable instrument to screen for psychosocial distress.
- These results have important implications for the delivery of screening and psychosocial referral for underserved populations.
- A shorter tool (CSS-Sp-15) is more efficient and can minimize burden on the clinic and hospital setting.
- Future research will test the implementation of CSS-Sp-15 for cultural sensitivity in diverse Spanish-speaking communities.