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Anxiety and Depression in Spanish-Speaking Latina Cancer Patients Prior to Starting Chemotherapy

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Abstract

Objective—Anxiety and depression can substantially impact the life of a cancer patient, but literature on emotional distress in the Hispanic cancer population is sparse. Additionally, the influence of psychosocial variables including age, acculturation, and spiritual wellbeing on emotional distress in this population remains unclear. The purpose of the present report was to assess the prevalence of anxiety and depression in Spanish-speaking Latina cancer patients preparing to begin chemotherapy and to explore the predictors and correlates of these outcomes.

Methods—Participants were 198 Spanish-speaking Latina cancer patients who completed measures of anxiety, depression, acculturation, and spiritual wellbeing prior to starting chemotherapy.

Results—Prevalence of clinically significant anxious symptomatology was 52%, and prevalence of clinically significant depressive symptomatology was 27%. Longer time since diagnosis and less acculturation predicted more severe anxiety, while longer time since diagnosis, less acculturation, and older age predicted more severe depression (ps < .05). In multivariable analyses, only time since diagnosis emerged as a significant predictor of anxiety and depression when accounting for the influence of other variables. Greater spiritual wellbeing was correlated with both less severe anxiety and less severe depression (ps < .001).

Conclusions—The present findings document the high prevalence of emotional distress, particularly anxiety, in this patient population prior to chemotherapy initiation and identify several demographic and clinical factors associated with increased risk for heightened distress. Additionally, these findings suggest that interventions to address distress in this patient population would benefit from including components that seek to improve patients' spiritual wellbeing.

Conflicts of Interest: None

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Keywords

cancer; oncology; anxiety; depression; Latina; Hispanic; acculturation; spiritual wellbeing

Background

Cancer diagnosis and treatment is a life-altering experience that can be accompanied by an increased risk of experiencing symptoms of anxiety and depression. (Linden,Vodermaier, MacKenzie, & Greig, 2012). Although much is known about anxiety and depression among cancer patients in general, research focused on the Hispanic cancer population has been sparse. Comprising 16% of the U.S. population, Hispanics are the largest ethnic minority group in the U.S. (U.S. Census, 2010). This study explored the prevalence, predictors, and correlates of anxiety and depression symptoms in Spanish-speaking Latina cancer patients preparing to undergo chemotherapy.

Emotional distress in the form of anxiety and/or depression can have a substantial impact on the quality of life of cancer patients and has been referred to as the sixth vital sign in cancer care (Bultz & Carlson, 2005). Although prevalence estimates vary widely from study to study (e.g., see reviews by Mitchell et al., 2011 and Van't Spijker, Trijsburg, & Duivenvoorden, 1997), a recent study of over 10,000 cancer patients found that approximately 32% experienced at least subclinical symptoms of anxiety in the post-diagnosis period; the prevalence of at least subclinical depression was slightly lower at approximately 29% (Linden et al., 2012). Estimates of depression prevalence in the Latina cancer population likewise vary greatly, with estimates ranging from just over 10% to nearly 25% for major depressive disorder (Costas & Gany, 2013; Ell et al., 2005) and from 32% to 53% for clinically significant depression symptoms (Ashing-Giwa, Rosales, Lai, & Weitzel, 2013; Holden, Ramirez, & Gallion, 2014). Anxiety symptoms have received much less attention in the Latina cancer patient population; anxiety prevalence in this population remains relatively unexplored.

Age may play a role in cancer patients' psychological well-being. Many studies suggest that age is inversely related to emotional distress in the overall cancer population, with younger patients experiencing more distress (Mosher & Danoff-Burg, 2006; Van't Spijker et al., 1997), but some fail to find a relationship between age and emotional distress (e.g., Rabin, Leventhal, & Goodin, 2004). Findings specific to the Latina cancer population are similarly mixed. For example, one study of a mixed cancers sample of Latinas found that women between 50 and 64 reported greater severity of depression symptoms compared to women aged 65 and older, while symptoms were less severe in the youngest women (<50 years old) compared to the 65 and older women (Ashing-Giwa et al., 2013). However, another study of Latina breast cancer survivors found no effect of age on depression symptoms (Aguado Loi et al., 2013).

Acculturation, often defined as "acquisition of the cultural elements of the dominant society" (Lara, Gamboa, Kahramanian, Morales, & Bautista, 2005), may influence a Latina cancer patient's treatment experience. Latina patients being treated for cancer in the U.S. bring their own cultural values and customs. Additionally, for many Latinas, English is not

their primary language, and they may prefer to communicate and receive information in Spanish (Huerta & Macario, 1999; Kar, Alcalay, & Alex, 2001). The cancer treatment process is often demanding in terms of language, literacy, and fluency (IOM, 1999; IOM, 2004), and the dominant culture's approach may not align with a Latina patient's culturally-informed preferences.

Many studies have explored the relationship between acculturation and distress in the general population. Some studies find that reports of depression decrease as acculturation increases (e.g., Torres & Rollock, 2007; Gonzalez, Haan, & Hinton, 2001), others find that depression is greater as acculturation increases (e.g., Ramos, 2005; Rivera, 2007), and some find no relationship between acculturation and depression (e.g., Capielo, Delgado-Romero, & Stewart, 2015; Masten et al., 2004; Torres, 2010). The relationship between acculturation and distress specifically in the Latina cancer population does not appear to have been evaluated formally in the literature to-date.

Finally, the extent to which cancer patients experience distress can be influenced by spiritual wellbeing, which may act as a coping resource. Spiritual wellbeing may be particularly salient for Latinas, who report using more religious coping strategies than non-Hispanic white women (Culver, Arena, Antoni, & Carver, 2002; Culver, Arena, Wimberly, Antoni, & Carver, 2004). Spiritual wellbeing can be conceptualized as a combination of meaning, peace, and purpose on the one hand and faith and spiritual beliefs on the other (Peterman, Fitchett, Brady, Hernandez, & Cella, 2002). Higher levels of spirituality have been associated with lower levels of depression in cancer patients (McClain, Rosenfeld, & Breitbart, 2003; Nelson, Rosenfeld, Breibart, & Galietta, 2002), and some literature suggests that the meaning/peace aspect of spiritual wellbeing is more influential than the faith aspect (Bai & Lazenby, 2015; Nelson et al., 2002).

The purpose of the present report was to assess the prevalence of anxiety and depression in Spanish-speaking Latina cancer patients preparing to begin chemotherapy using a validated Spanish-language measure and to explore the predictors and correlates of these outcomes. In light of the mixed findings in the existing literature, hypotheses were not formulated for the relationships of age and acculturation with distress. However, spiritual well-being, particularly the meaning/peace aspect, was expected to be associated with lower levels of anxiety and depression.

Method

Participants and Procedure

Participants included in the current analyses were recruited between April 2012 and November 2015 as part of a larger institutional review board-approved stress management intervention study (University of South Florida IRB# Pro00006699, University of Miami IRB #20111145). The study's eligibility criteria required all participants to (1) be at least 18 years of age, (2) be female, (3) self-identify as Hispanic or Latina, (4) be able to speak and read Spanish, (5) be diagnosed with cancer and scheduled to start outpatient intravenous chemotherapy for reasons other than symptom palliation, (6) have not received chemotherapy in the past two months, (7) have no documented or clearly observable

disorders that would impede participation in the study (e.g., blindness or psychosis), and (8) be willing to provide written informed consent. Potential participants were identified via electronic appointment systems at Moffitt Cancer Center, the University of Miami/Sylvester Comprehensive Cancer Center, and Jackson Memorial Hospital. They were recruited by trained research associates in person during their initial consultations with attending oncologists or just prior to their first chemotherapy infusion. In the larger study from which this sample was drawn, 91% of patients who were approached agreed to participate. Patients who met eligibility criteria and provided informed consent completed a packet of Spanish-language questionnaires in a private area of the clinic. Data for the present analyses came from this pre-chemotherapy (baseline) assessment that was conducted before participants were notified of their intervention assignment in the larger study.

Measures

Patient characteristics—Patients' demographic characteristics were collected using a standard self-report questionnaire. Clinical characteristics were obtained through medical chart review.

Acculturation—Acculturation was assessed using the Short Acculturation Scale for Hispanics (SASH), which evaluates acculturation with respect to preference for Spanish versus English in the contexts of language use, media, and ethnic social relations (Marin, Sabogal, Marin, Otero-Sabogal, & Perez-Stable, 1987). The SASH contains 12 items rated on a 5-point scale, with higher scores indicating a greater degree of acculturation. In the present study, Cronbach's alpha for the SASH was .94.

Anxiety and depression—Symptoms of anxiety and depression were assessed using the validated Spanish version of the Hospital Anxiety and Depression Scale (HADS), which contains 14 items that assess frequency of experiencing symptoms of anxiety (7 items) and depression (7 items) in the past week on 4-point scale. Scores for each subscale range from 0–21, with higher scores indicating greater symptomatology (Herrero et al., 2003; Zigmond & Snaith, 1983). In the present study, Cronbach's alpha was .84 for anxious symptomatology and .82 for depressive symptomatology. Analyses for clinically significant anxiety and depression were conducted using the cutoffs of 8 for anxiety and 8 for depression as is generally recommended (Bjelland, Dahl, Tangen Haug, & Neckelmann, 2002).

Spiritual wellbeing—Spiritual wellbeing was assessed using the validated Spanish version of the Functional Assessment of Chronic Illness Therapy-Spiritual Well-Being Scale (FACIT-Sp) (Peterman et al., 2002). The FACIT-Sp contains 12 items rated on a 5-point scale and yields scores for meaning/peace and faith, with higher scores indicating greater wellbeing. In the present study, Cronbach's alpha was .85 for meaning/peace and .89 for faith.

Statistical Analyses

Before testing study hypotheses, means and frequencies were computed for participant demographic and clinical characteristics as well as anxious and depressive symptomatology.

Next, independent relationships between outcomes (anxious and depressive symptomatology) and potential predictors (participant demographic and clinical characteristics, years in U.S., and acculturation) and correlates (spiritual well-being) were evaluated in correlational analyses. Finally, separate regression analyses were conducted for anxious and depressive symptomatology in which demographic characteristics (age, race, marital status, and education) years in U.S., acculturation, and clinical characteristics (time since diagnosis and cancer stage) were entered simultaneously.

Results

Participant Characteristics

The present analyses include data from 198 Spanish-speaking Latina cancer patients. Demographic, clinical, and psychosocial characteristics of the sample are presented in Table 1. The wide range in days from diagnosis to study participation partly reflects the fact that 16 women were undergoing treatment for recurrent cancer.

Prevalence of Anxiety and Depression

Participants' mean score on the anxiety subscale of the HADS was 7.92 (SD = 4.36; range = 0–21), and 52% met the cutoff for clinically significant anxious symptomatology. Participants' mean score on the depression subscale of the HADS was 4.80 (SD = 4.02; range = 0–17), and 27% met the cutoff for clinically significant depressive symptomatology. Just under one-fourth of participants (23%) met the cutoff for clinical significance for both anxiety and depression, 29% met the cutoff for anxiety only, 4% met the cutoff for depression only, and 44% did not meet either cutoff.

Predictors of Anxiety and Depression

Correlations between potential predictors of distress and anxious and depressive symptomatology are presented in Table 1. Only time since diagnosis and acculturation were significantly correlated with anxiety, such that more time since diagnosis and a lower degree of acculturation were associated with greater anxious symptomatology. Acculturation's relationship with anxiety was driven primarily by the media subscale ($r = -.17$, $p = .01$); the other two subscales did not correlate significantly with anxiety ($r = -.13$, $p = .08$ for the language subscale and $r = -.10$, $p = .16$ for the social subscale). The same was true for the relationship between acculturation and depression (media subscale: $r = -.15$, $p = .03$; language subscale: $r = -.13$, $p = .06$; social subscale: $r = -.12$, $p = .10$). Time since diagnosis and age were significantly correlated with depression such that more time since diagnosis and older age were associated with greater depressive symptomatology.

Correlates of Anxiety and Depression

Greater spiritual wellbeing was associated with lower anxiety ($r = -.53$, $p < .001$) and depression scores ($r = -.62$, $p < .001$). These relationships were stronger for the meaning/peace subscale (anxiety: $r = -.60$, $p < .001$; depression: $r = -.65$, $p < .001$) than for the faith subscale (anxiety: $r = -.23$, $p = .001$; depression: $r = -.36$, $p < .001$).

Regressions Predicting Magnitude of Anxiety and Depression

Results of regression analyses predicting anxiety and depression scores from demographic characteristics (age, race, marital status, and education), years in U.S., acculturation, and clinical characteristics (time since diagnosis and cancer stage) are presented in Table 2. Together the variables predicted 8% of the variance in anxiety, and only time since diagnosis emerged as a significant predictor when accounting for the influence of the other variables ($\beta = .21$, $p = .01$). Similarly, the variables predicted 9% of the variance in depression, and only time since diagnosis was a significant predictor ($\beta = .22$, $p = .01$).

Discussion

In the present sample of Latina cancer patients preparing to begin chemotherapy, both anxiety and depression were highly prevalent, with 52% of patients reporting clinically significant levels of anxious symptomatology and 27% of patients reporting clinically significant levels of depressive symptomatology. Longer time since diagnosis and a lower degree of acculturation were associated with greater anxious and depressive symptomatology, and older age was associated with greater depressive symptomatology. Spiritual wellbeing, particularly the meaning/peace aspect, was related to both anxiety and depression such that greater spiritual wellbeing was associated with less emotional distress. Accounting for the influence of other variables, only time since diagnosis was a significant predictor of anxiety and depression in multivariable analyses.

The prevalence of clinically significant depressive symptomatology observed in this study (27%) using the HADS is comparable to that observed in a recent study of Latina breast cancer survivors using the standard English version of the Center for Epidemiologic Studies Depression Scale (32%) (Holden et al., 2014). The prevalence of clinically significant anxious symptomatology (52%) was much higher than that observed for depressive symptomatology. The possibility that anxiety is more common than depression in Latina cancer patients warrants additional study and underscores the importance of assessing both symptoms in this population.

The positive relationship between age and depressive symptomatology and the lack of a relationship between age and anxious symptomatology in the present study, while somewhat unexpected, is not entirely novel. Although studies not limited to Latinas have generally observed that younger women with cancer experience greater depressive and anxious symptomatology (Mosher & Danoff-Burg, 2006), findings in the Latina cancer population have been inconclusive (Aguado Loi et al., 2013; Ashing-Giwa et al., 2013). The present results indicating that the relationship between age and depression in the Latina cancer population is opposite to the typical pattern suggest there may be important differences in how younger and older Latinas are affected emotionally by cancer relative to the general population. One possible explanation that should be considered for the observed positive relationship between age and depression is whether older Latinas have a more fatalistic view of cancer (i.e., a stronger belief that death inevitable when cancer is present) (Powe & Finnie, 2003).

The negative relationship observed between acculturation and emotional distress in the present study should be interpreted in the context of the broader literature where a negative relationship (e.g., Torres & Rollock, 2007; Gonzalez, Haan, & Hinton, 2001), a positive relationship (e.g., Ramos, 2005; Rivera, 2007), or no relationship (e.g., Capielo, Delgado-Romero, & Stewart, 2015; Masten et al., 2004; Torres, 2010) have been observed between these variables in the Hispanic population. The lack of consistent findings seems to be attributable, in part, to differences across studies in how acculturation has been measured. Measures of acculturation focus on everything from sociodemographic characteristics and cultural values to language preferences and preferred groups for social interactions (Marin et al., 1987). Results from the present study suggest that the presence of items capturing media language preferences contributed strongly to the observed relationship between acculturation and emotional distress. Future research should systematically explore how various facets of acculturation are differentially related to outcomes including emotional distress.

A key finding that emerged from both the univariate and multivariable analyses was the positive relationship observed between time since diagnosis and emotional distress. It should be noted that, while the average time since diagnosis was just under four months, the elapsed time since diagnosis ranged from less than a year to nearly 12 years across patients. One possible explanation for the observed relationship between time since diagnosis and distress is that greater elapsed time since diagnosis may be associated with greater likelihood that the patient is starting chemotherapy for a disease recurrence or progression. Studies using retrospective data suggest that cancer patients consider news of their recurrence to be more upsetting than their initial diagnosis (e.g., Mahon, Cella, & Donovan, 1990). In one of the few controlled studies on this topic, Andersen et al. (2005) found that women assessed shortly after a breast cancer recurrence reported greater cancer-specific distress than disease-free women who were matched on time since initial diagnosis. Lack of data in the present study on disease progression or recurrence precludes a formal evaluation of this possibility.

Study findings provided strong support for the hypothesis that greater spiritual wellbeing would be associate with less anxiety and depression. These findings are consistent with the broader literature demonstrating a negative relationship between spiritual wellbeing and depression in people with cancer (McClain, Rosenfeld, & Breitbart, 2003; Nelson, Rosenfeld, Breitbart, & Galietta, 2002) and the fact that Latinas with cancer have been found to rely particularly heavily on religious coping strategies (Culver, Arena, Antoni, & Carver, 2002; Culver, Arena, Wimberly, Antoni, & Carver, 2004). Consistent with prior research (Bai & Lazenby, 2015; Nelson et al, 2009), correlations with anxiety and depression were strongest for items measuring the meaning/peace aspect of spiritual well-being.

Strengths and Limitations

The current study has several strengths including recruitment of a sample comprised entirely of Spanish-speaking Latinas with cancer, the multi-site nature of the study, and the assessment of participants at a key time point in their treatment trajectory (i.e., just prior to chemotherapy initiation). However, there are also limitations that must be acknowledged. Study limitations include use of baseline data from individuals who consented to participate in a study of stress management training (a feature that may limit generalizability), lack of

procedures for diagnosing the presence of actual anxiety and mood disorders rather than clinically significant symptomatology, and measurement at a single time point that may not represent these women's symptoms at all points in the cancer care continuum. Additionally, the absence of a comparison group precludes comparisons between Latinas and women from other ethnic backgrounds.

Clinical Implications

Nevertheless, the study yielded several findings with implications for clinical practice. First, results showing that clinically significant emotional distress is common prior to chemotherapy initiation reinforces the importance of routinely screening for and addressing anxiety and depression in this patient population at this pivotal time, as recommended by clinical practice guidelines (Andersen et al, 2015). Furthermore, these services should to be made available in the patient's preferred language. Second, the present results identify several factors that may help to identify Latinas at particular risk for heightened distress prior to chemotherapy initiation (i.e., those who are older, less acculturated, and longer from the time of diagnosis). Third, findings regarding spiritual wellbeing suggest that interventions to address heightened distress in this patient population may be particularly beneficial if they include components focused on finding meaning in and accepting one's current life situation, strategies common to several positive psychology and "third wave" intervention approaches (Casellas-Grau et al, 2014; Hulbert-Williams et al, 2015).

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Table 1

Participants' demographic, clinical, and psychosocial characteristics (N = 198)

Variable	**Mean**	**SD**	**Range**
Age (years)	51.77	13.87	27–87
Days since diagnosis	114	339	2–4316
Years in U.S.	24.76	17.05	0–64
SASH score	25.15	10.75	12–52
FACIT-Sp score	38.63	7.56	15–48
Variable	*N*	% of valid cases	
Race (White)	146	84.4	
Marital status (married)	104	52.8	
Education (high school graduate)	104	66.5	
Place of Origin			
U.S. and territories	45	24.9	
Mexico	16	8.8	
Central America	19	10.5	
South America	26	14.4	
Caribbean	75	41.4	
Cancer Type			
Breast	160	80.8	
Ovarian	12	6.1	
Other	26	13.1	
Cancer Stage			
Stage 1	32	16.2	
Stage 2	83	41.9	
Stage 3	67	33.8	
Stage 4	16	8.1	

Table 2

Correlations between potential predictors of distress and anxious and depressive symptomatology.

	Age	Race	Marital Status	Education	SASH Total	SASH Lang.	SASH Media	SASH Social	Years in U.S.	Disease Stage	Time Since DX
Anxiety	.03	.04	.00	−.12	−.15*	−.13	−.17*	−.10	−.07	.04	.17*
Depression	.20**	−.07	−.13	−.09	−.15*	−.13	−.15*	−.12	−.01	.08	.17*

Note.

* $p < .05$,

** $p < .01$,

*** $p < .001$.

Table 3

Regression analyses predicting anxious and depressive symptomatology.

	Beta	*P*-value
Anxiety		
Age	.00	.97
Race	.06	.43
Marital Status	−.03	.66
Education	−.05	.55
Years in U.S.	.03	.81
Acculturation	−.15	.19
Time Since Diagnosis	.21	.01
Stage	.03	.74
Depression		
Age	.12	.21
Race	−.02	.84
Marital Status	−.12	.13
Education	.00	.96
Years in U.S.	.03	.81
Acculturation	−.12	.31
Time Since Diagnosis	.22	.01
Stage	−.02	.80

Note. Anxiety: $F(8,152) = 1.55$, $p = .14$. Depression: $F(8,152) = 1.93$, $p = .06$.