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The Role of Fear and Stigma in Perpetuating Racial Health Orientation Disparities in Emerging Adults

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Abstract

This study examined relationships between cancer fear, race, anticipated stigma of chronic illness, and health orientation in emerging adults (N = 152). Hierarchical regressions and moderation analyses were used to evaluate the predictive nature of these variables on health orientation, as well as to determine the moderating role of race between cancer fear, anticipated stigma of chronic illness, and health orientation. Family history of chronic illness and cancer fear were both found to predict health orientation scores significantly. In addition, although people of color reported greater levels of anticipated stigma of chronic illness, race did not moderate the relationship between anticipated stigma of chronic illness and health orientation. With the findings of this study in mind, mental health professionals have an opportunity to work with clients, particularly clients of color, to combat stigma of chronic illness.

Keywords: health orientation, cancer fear, health disparities, stigma, mental health

The Role of Fear and Stigma in Perpetuating Racial Health Orientation Disparities in Emerging Adults

Cancer is the second leading cause of premature death in the United States, resulting in deaths of more than half a million Americans each year (Centers for Disease Control and Prevention [CDC], 2016), and accounting for 1 in 4 deaths in the United States and almost 5000 new cases each day (CDC, 2016; Siegel et al., 2020). Furthermore, health disparities are evident in cancer treatments and outcomes, leading people of color (POC) to be diagnosed with, and die from, cancer more often than other demographic groups (Peek et al., 2008). By 2030, cancer rates will grow by 45% (e.g., 2.3 million individuals diagnosed each year), with the bulk of this increase expected to occur within POC (Jenerette & Mayer, 2016).

The National Cancer Institute (NCI, 2021) refers to *Cancer Health Disparities* as the differences in mortality and occurrence experienced by one population compared to others. The prevalence of death among those diagnosed with cancer is 33% higher in POC patients than non-POC patients, with overall higher mortality rates in Black communities when compared to other racial and ethnic groups (O'Keefe et al., 2015; Siegel et al., 2020). Furthermore, women of color are more likely to seek treatment once cancer has reached a more severe stage than White women, who are more likely to engage in preventative health behaviors (Hung et al., 2016). These health disparities extend to men as well: men of color have significantly higher cancer incidence than non-POC men and are 1.5 times more likely to die of colorectal cancer (Siegel et al., 2011). Given these concerns and the importance of cancer prevention throughout adult development starting in early adulthood years (e.g., Simmons et al., 2017), the purpose of this study was to better understand health disparities related to race and chronic illness by examining

racial differences in health orientation, cancer fears, and the anticipated stigma of chronic illness in a college-aged population.

An essential first step in cancer prevention includes promoting health consciousness (i.e., involvement in one's health, health awareness) and healthy behavior changes (e.g., exercise, seeking medical/preventative care, information seeking; Miles et al., 2008). Health consciousness is a core component of *health orientation,* a broad concept that refers to individuals' personal motivation for engaging in healthy behaviors, beliefs, and attitudes (Dutta et al., 2008). Those who engage in health-conscious behaviors ultimately have a better success rate if diagnosed with a chronic illness than those who do not engage in health-conscious behaviors, making health orientation an important part of treating clients living with, or at risk for, chronic illness (Miles et al., 2008). However, despite the abundance of health information thanks to mass media and increased access to health resources, many individuals avoid seeking health information due to fear (e.g., fear of cancer or a chronic illness diagnosis; Nelissen et al., 2015). In one study, Wood and colleagues (2020) noted that health orientation, especially health anxiety, is associated with fear of cancer. Given that health anxiety can arise in college-aged students and increase throughout adult development (Newby et al., 2017; Sunderland et al., 2013), it is important to understand what counselors can do to undertake preventative measures to reduce this anxiety. Further, the experience of health anxiety, such as fear of cancer, is tied to social inequalities (Barbek et al., 2022). In addition to a fear of chronic illness, the stigma of chronic illness can prevent individuals from receiving appropriate health treatments (Knight et al., 2016).

Fear & Stigma of Chronic Illness

Cancer is regularly cited as a chronic illness that evokes fear, because people often view it as malicious, untreatable, and challenging to manage (Vrinten et al., 2017). *Cancer fear* refers to negative emotions associated with cancer (Hay et al., 2005). Many Americans admit they fear cancer more than any other chronic illness, and this fear is more common in women and POC (Vrinten et al., 2016; Vrinten et al., 2014). More than a third of the general population worry about cancer, with 8% of the population worrying often about cancer (Han et al., 2007). Similarly, almost a quarter to half of the population worry about getting cancer, with 5–10% reporting extreme worry about getting cancer (Vrinten et al., 2018; Vrinten et al., 2015; Vrinten et al., 2014).

Fear of chronic illness can lead to health avoidant behaviors and perpetuate negative feelings; therefore, fearful individuals are less motivated to engage in healthy behaviors even after receiving positive information about cancer (Miles et al., 2008). Furthermore, researchers have noted that people with a high level of cancer fear and psychosocial stress are more likely to avoid information related to cancer (Vrinten et al., 2018). This fear-driven avoidance further creates passivity in health behaviors, serving as a barrier to cancer screenings, physician consultations, and adherence to treatment advice (Powe & Finnie, 2003; Straughan & Seow, 1998).

Often, cancer fear is associated with behavioral avoidance (i.e., delaying seeking medical intervention) and cognitive avoidance (i.e., avoiding cancer information; Lund-Nielsen et al., 2011; Nelissen et al., 2015). Oncologists who work with POC have cited fear as one reason that prevents their patients from seeking appropriate screenings and follow-up care (White-Means et al., 2017), elements of health orientation known to be associated with overall client health (Miles et al., 2008). Screenings aimed at cancer prevention have distinct benefits for young adults,

particularly as it relates to cancers most often found in young adults (e.g., Human papillomavirus-related cancers; Brindis, 2017). The effects of cancer fear on help-seeking behaviors also differ depending on the nature of fear. For instance, fear about cancer treatment and death might evoke avoidance behaviors of getting medical attention and treatment, whereas fear of getting cancer might motivate early detection and screening behaviors (Balasooriya-Smeekens et al., 2015).

Similarly, stigma is often a barrier to adequate care and prevention, dissuading individuals from seeking treatment (Knight et al., 2016). *Cancer stigma* refers to feelings of guilt, blame, denial, isolation, and negative self-talk experienced by people diagnosed with cancer (Weiss et al., 2006). This stigma of chronic illness is further exacerbated in communities of color, as POC regularly report discrimination from their healthcare providers (Budhwani & De, 2019). Cancer stigma is strongly associated with psychosocial adjustment among cancer survivors (Kang et al., 2020). Often, internalized cancer stigma evokes feelings of shame and guilt, which are associated with higher anxiety and depressive symptoms (Williamson et al., 2020). Because cancer disproportionately affects POC (Peek et al., 2008), it has been hypothesized that the fear and stigma often associated with these chronic illnesses might, in turn, disproportionately affect these communities, which is supported by some of the earliest research on cancer stigma and race (Ciaralli et al., 2021). This is similar to findings that cancer fears often grow with age due to most cancer diagnoses occurring in older adults (Synowiec-Piłat & Pałęga, 2018).

In addition to the physical impact of chronic illness, Weinstein and colleagues (2016) found high rates of comorbidity with mental illness and other chronic illnesses. For example, anxiety disorders and depression are prevalent in those living with chronic illnesses (Lim et al.,

2012). Considering the breadth of mental health concerns and the subsequent importance of mental health intervention in people living with or fearing chronic illness, this information is particularly relevant to mental health professionals. Noting the aforementioned relationships between fear of chronic illness and health orientation (e.g., seeking health screenings, attending follow-up, seeking health information), mental health providers might also have an important role in working to alleviate cancer fears in order to combat growing health disparities and look toward prevention of possible cancer in adult development. Mental health providers have a further role in combatting fear and stigma of chronic illness and identifying ways to increase health orientation as one of the benefits of integrated care (e.g., increased patient satisfaction, increased quality of care; Baxter et al., 2018; Kodner, 2009).

The Present Study

Many college students have one or more chronic illnesses, and many others could develop a chronic illness during this their college years (Herts et al., 2014; Stewart-Brown et al., 2000). Moreover, college might be the first experience for many students where the expectation is to live independently (Stephens et al., 2012), and therefore independently attend to their own health. The added stress of college (e.g., academic pressures and examinations) then makes this population particularly vulnerable to developing physical and mental health concerns (Pascoe et al., 2020; Stults-Kolehmainen & Sinha, 2014). During this vulnerable time, counselors can play a role in addressing health disparities in cancer and can look toward cancer prevention: encouraging positive health behaviors, encouraging screening for those at risk for cancer, and addressing psychosocial concerns that might come about when discussing health (Honda et al., 2005). Many college-aged individuals are aware of their potential risk of cancer but might not engage in their own prevention efforts through attending to positive health behaviors (Servaty-

Seib et al., 2018) because their risk for cancer can seem distant. Further, their risk for developing health anxiety starts around this age and continues to rise throughout adulthood (Newby et al., 2017; Sunderland et al., 2013). Thus, college-aged individuals are at a crucial stage for their adult development when it comes to health throughout their lifetime.

The purpose of this study was to better understand health disparities related to race and chronic illness, by examining racial differences in health orientation, cancer fears, and the anticipated stigma of chronic illness. Previous investigators provided important information on the health disparities that presently exist between POC and non-POC counterparts and how these disparities are further present when looking at cancer. Disproportionate rates of cancer mortality and diagnosis among communities of color, as well as existing levels of stigma from health providers, suggest that POC could be particularly fearful of cancer, while anticipating more shame or stigma surrounding chronic illness. The following research questions guided our work: (a) Are there group differences based on race when looking at cancer fears, anticipated stigma of chronic illness, and health orientation? (b) Are race, cancer fear, and anticipated stigma predictive of health orientation? (c) Does race moderate the relationship between cancer fear and health orientation? (d) Does race moderate the relationship between anticipated stigma of chronic illness and health orientation?

Methods

Procedures

Participants were 152 undergraduate students studying at a large urban, southeastern university. An a priori power analysis was conducted using G*Power (version 3.1) with an alpha of .05, a medium effect size, and the five predictor variables (three stigma subscales, race, and cancer fear), and the desired sample was 92, suggesting the present sample was sufficient.

Inclusion criteria for the study required that participants be over the age of 18 and able to consent to the research. Participants were recruited through an online system, where undergraduate students enrolled in counseling electives were given the option to participate in research in exchange for course credit. Students logged in to this system with a unique student ID number, which ensured students did not participate in the research more than once. Students were also offered an alternative assignment option, keeping the research completely voluntary.

Sample

The sample (N = 152) consisted of 49% men (n = 74), 50% women (n = 76), 0.5% intergender (n = 1), and 0.5% (n = 1) identifying as an identity that was not listed. Race data were collected so that comparisons of the variables could be made between participants of color and non-POC participants. Race was self-reported by study participants, with 78% (n = 118) identifying as POC (n = 68 identified as Black or African American; n = 25 identified as Asian; n = 12 identified as Hispanic; n = 12 identified as biracial or multiracial; and n = 2 identified as middle eastern); 22% (n = 33) identified as White. After running a series of analyses of variance (ANOVA), no significant differences ($p > .05$) were found in cancer fear, anticipated stigma, or health orientation scores based on these specific racial identity groups (e.g., Black, Asian, White, Hispanic, Biracial, etc.). Lastly, the sample identified as predominantly heterosexual (n = 134, 88%), followed by gay (n = 9, 6%), bisexual (n = 6, 4%), and a sexual orientation other than an option provided (n = 3, 2%). Thirty-four participants (22.4%) identified as having a chronic illness (e.g., n = 22, asthma; n = 2, diabetes; n = 1, HIV; n = 1, heart disease; and n = 9, other). Most (n = 109, 71.7%) identified as having a family member living with a chronic illness. No one identified as being a cancer survivor, but 91 (59.9%) participants identified having a family member with a cancer history.

Measures

Cancer Fear Scale. The Champion Breast Cancer Fear Scale (Champion et al., 2004) was used to measure emotional responses to cancer fear in participants. The scale consists of 8 items, and is scored on a 5-point Likert scale with answers ranging from *strongly agree* (5) to *strongly disagree* (1). Scores range from 8-40, with a higher total score on the instrument representing greater fears about cancer. Low fear has been defined as a score of 8-15, moderate fear scores range from 16-23, and high fear is represented with scores of 24 or higher (Secginli, 2012). Sample items include "When I think about cancer, my heart beats faster," and "When I think about cancer, I feel anxious." The scale has shown strong reliability when used in previous research (e.g., .91, .94, Secginli, 2012), and has a Cronbach's alpha of .93 in the present sample.

The Chronic Illness Anticipated Stigma Scale. The Chronic Illness Anticipated Stigma Scale (Earnshaw et al., 2013) was originally developed to measure levels of stigma that people living with chronic illness expect they will experience. For the present study, participants were prompted to complete the assessment as if they were living with a chronic illness in the future (i.e., anticipated discrimination they would receive if one day living with a chronic illness). The scale consists of 12 items, and results in a total score representing anticipated stigma from: (a) friends and family, (b) work colleagues, and (c) healthcare workers. Confirmatory factor analysis confirmed this three-factor model (Earnshaw et al., 2013). Sample items include "a friend or family member will blame you for not getting better." Items are ranked on a 5-point Likert scale, ranging from 1 (*very unlikely*) to 5 (*very likely*). Items on the scale have shown strong reliability, with alphas of .95 (Earnshaw et al., 2013). Cronbach's alpha in the current sample was .90.

Health Orientation Scale. The Health Orientation Scale (Snell et al., 2013) is a 50-item instrument used to measure the psychological variables related to physical health. The scale

includes 10 subscales, each made up of 5 items: personal health consciousness, health image concern, health anxiety, health esteem-confidence, motivation to avoid unhealthiness, motivation for healthiness, internal health control, external health control, health expectations, and health status. Together, these subscales capture an individual's awareness of and focus on their health, concern with the outward impression of their health, tendency to feel positive about their physical health, and beliefs on whether they can control their own health. Items are ranked through a 5-point Likert scale ranging from 1 (*not at all characteristic of me*) to 5 (*very characteristic of me*). A sample item includes "I do not expect to suffer health problems in the future" (health expectations subscale). The scale has shown convergent validity through correlations with Bausell's (1986) measure of health-promoting behaviors. In addition, items on the scale have shown adequate reliability, with alphas ranging from .69-.92 for the various subscales (Snell et al., 1991). For the full scale, Cronbach's alpha within the current sample was .93.

Data Diagnostics

Before exploring the aforementioned hypotheses, data were cleaned and screened for potential concerns (i.e., normality, outliers, missing data). Alongside inspection of histograms (Tabachnick & Fiddell, 2018), skewness and kurtosis levels were also examined to assess normality. All skewness levels were less than an absolute value of 2, and all kurtosis levels were less than an absolute value of 7, so the data were deemed to be normally distributed (West et al., 1996). Two cases were deemed to be outliers through inspection of box plots and histograms and therefore were removed from the data set prior to main analysis. A missing data analysis determined that data were missing completely at random, so the authors used multiple imputation for missing data, with the exception of demographic data (Tabachnick & Fidell, 2018).

Results

Group Differences

Before answering our research questions, data were assessed for additional group differences that might affect the findings, such as group differences based on participant demographics related to chronic illness. A series of *t*-tests determined no group differences existed in health orientation scores $t(150) = -.359$, $p = .72$; cancer fears $t(150) = -.248$, $p = .81$; or anticipated stigma of chronic illness $t(150) = .361$, $p = .72$, based on whether participants were living with a chronic illness. Similarly, participants did not have differences in cancer fears $t(150) = .583$, $p = .56$, or anticipated stigma of chronic illness $t(150) = .281$, $p = .60$, based on whether their families had a history of chronic illness. Differences did exist, however, in terms of health orientation scores $t(150) = .565$, $p = .05$, with participants with no family history of chronic illness showing higher health orientation scores ($M = 336.33$, $SD = 48.62$) than those with family history of chronic illness ($M = 318.02$, $SD = 51.98$).

Our first research question examined group differences between POC and non-POC participants when looking at the dependent variables of anticipated stigma of chronic illness, cancer fear, and health orientation. Independent samples *t*-tests were conducted to compare anticipated stigma scores and cancer fears between these groups. POC scored higher in anticipated stigma of chronic illness ($M = 2.09$, $SD = .74$), when compared to non-POC participants ($M = 2.03$, $SD = .54$), yet these differences were not significant, $t(150) = .567$, $p = .57$. Non-POC scored slightly higher in cancer fear scores ($M = 26.41$, $SD = 7.08$) than POC ($M = 26.25$, $SD = 7.45$), but these differences were not significant, $t(150) = -.116$, $p = .91$. However, scores above 24 suggest high cancer fear (Secginli, 2012), indicating that this sample, regardless of race, reported a great deal of cancer fear on average. In considering group differences for

health orientation, the previous demographic findings were considered. Therefore, when looking at health orientation scores, a one-way between-groups analysis of covariance (ANCOVA) was used so that family history of chronic illness could serve as a covariate. POC scored higher on health orientation scores (M = 326.39, SD = 51.54) compared to non-POC participants (M = 312.12, SD = 50.81), yet these differences were not significant $F(1, 149) = 2.02$, $p = .16$.

Predictors and Moderators

Our second research question examined the predictive nature of race, cancer fear, and anticipated stigma of chronic illness on health orientation scores. Due to its relationship with health orientation scores, the demographic variable of family history of chronic illness was controlled for through the use of a hierarchical regression (i.e., putting family history of chronic illness in Block 1, and the remaining predictor variables in Block 2). Further, because race in this example had two categories (POC or non-POC), we included one dummy variable (0/1 variables) in the regression. Results of the multiple linear regression indicated that together these predictors contributed to a significant model, $F(4, 147) = 4.39$, $p < .01$, $R^2 = .107$. The control variable (family history of chronic illness) alone predicted 2.6% of this change ($R^2 = .026$) suggesting the remaining variables (race, cancer fear, and stigma) explained the additional 8% of variance in health orientation scores. When looking at the individual predictors, cancer fear was the only one significantly contributing to the model ($t = 3.23$, $p < .01$), contributing to 6.7% of the variance in health orientation scores. The results from this analysis are presented in Table 1.

Our final two research questions explored whether race served as a moderator between cancer fear and health orientation and anticipated stigma of chronic illness and health orientation. Again, the demographic variable of family history of chronic illness was controlled for in these analyses. For cancer fear, the overall model was statistically significant, $R^2 = .11$, $F(4, 147) =$

4.68, $p = .001$, but race did not serve as a significant moderator within this model ($p = .51$). The overall model for stigma of chronic illness was not significant, $R^2 = .05$, $F(4, 147) = 2.04$, $p = .09$, and race did not serve as a significant moderator within this model ($p = .42$).

Discussion

Contrary to previous researchers who found significant health disparities between POC and non-POC related to cancer diagnoses and deaths (e.g., Jenerette et al., 2016; Peek et al., 2008), there were no significant differences in any of our outcome variables based on race. Despite this lack of significance, it is worth noting that POC in this sample showed higher scores in terms of anticipated stigma of chronic illness. This finding could have ties to previous literature that cites regular experiences of discrimination and stigma that POC feel from health care providers (Budhwani & De, 2019). This finding could be of particular importance for mental health professionals because health stigma is associated with poorer psychological adjustment, such as feelings of anxiety and depression (Williamson et al., 2020). Against what was expected based on the literature, however, participants of color also showed lower scores in terms of cancer fears, and higher scores in terms of health orientation. These findings bring important implications that suggest other variables are likely at play when considering the stark racial health disparities that exist in this country.

Perhaps the most significant finding of this research was that cancer fear was the most significant predictor of health orientation scores, contributing to 7.1% of the variance. Health orientation includes concepts such as health anxiety (the appearance of one's health to others), health consciousness (one's tendency to reflect on their own health), and the internal and external control that one believes they have over their own health status (Snell et al., 2013). Knowing that more than a third of the population worries about cancer (Han et al., 2007), it is

not surprising that this variable had a measurable impact on participants' health orientation. This finding is consistent with previous research, as cancer fear can lead to health avoidant behaviors (e.g., avoiding health seeking behaviors and health information; Lund-Nielsen et al., 2011; Nelissen et al., 2015), which would then affect overall health orientation. Last, in contrast to what might be expected based on previous research, race was not a significant moderator between cancer fear or anticipated stigma of chronic illness and health orientation. This is not to say that race has no interaction with these variables in practice, but rather that this interaction was not statistically significant among participants in our study.

Clinical Implications

The reported findings have implications for mental health professionals, particularly, licensed mental health counselors. Given the predictive nature of cancer fear on health orientation and the high levels of cancer fear present within the sample, mental health professionals have an opportunity to combat fears with their clients, such that a health awareness of cancer can support health behaviors moving into middle and older adulthood when most cancers are diagnosed (SEER Cancer Stat Facts, 2019). These fears might be ever present in all clients, regardless of race, although clients of color could certainly face greater threats from illnesses such as cancer or elevated experiences of stigma associated with illness. Fear of cancer is more typically looked at in terms of reoccurrence for those who have already survived cancer, but this research could bring important implications that can be used with fear of cancer in all clients, especially younger individuals who are not in the average age range for diagnosis of new cancers (i.e., 66; SEER Cancer Stat Facts, 2019). For example, preliminary data exist that support the use of group techniques in lowering cancer fears (Tomei et al., 2018). Within these groups, cognitive restructuring, relaxation techniques, and existential approaches were helpful in

combatting these fears. Hall and colleagues (2018) presented a systemic review and meta-analysis of interventions for cancer fears in relation to cancer reoccurrence; their findings summarized the effects of mind-body interventions, including cognitive-behavioral relaxation skills and mindfulness-based stress reduction.

It should be noted, however, that the positive relationship between cancer fear and health behaviors can be confusing: Is a fear of cancer good if it produces better health behaviors? Given the average scores, it appears that a balance should be made between the awareness of potential health problems in the future while still supporting positive health behaviors to create a sense of wellness. Were the fear of cancer to develop into illness anxiety (American Psychiatric Association, 2022; Scarella et al., 2019), the increased health behaviors might also become problematic from a clinical perspective. If clinically significant health anxiety persists, counselors can employ cognitive behavioral therapy and other behavioral therapies that have been found to be effective in treating illness anxiety (Scarella et al., 2019). Given the college-aged population of the current study, and knowing that illness anxiety can develop in early adulthood and increases through middle adulthood (Newby et al., 2017; Sunderland et al., 2013), it stands to reason that screening and intervention for cancer fear at this age might be important for health development. Therefore, counselors should look toward understanding when an awareness of cancer risk is healthy, especially for those more likely to develop cancer due to hereditary factors or health disparities (SEER Cancer Stat Facts, 2019), and when a fear of cancer causes more distress that removes the balance provided by increased health behaviors.

Mental health professionals can also work to combat stigma of chronic illness, particularly with clients of color. The first step in doing this might be for mental health providers to reflect on negative stereotypes or judgments of chronic illness they personally carry, as stigma

felt from professionals further exacerbates stigma from the public and self-stigma (Smith et al., 2013). Similarly, as integrated care becomes more popular, and mental health professionals find themselves working alongside more medical professionals, counselors have an advocacy opportunity in working to dismantle stigma that might exist within integrated care teams.

Limitations & Future Research

Although this study is one of the first of its kind to explore these variables in the context of counseling, it is not without limitations. Most notably, the presented relationships were found through cross-sectional research, meaning causality cannot be determined. In addition, this research relied on self-report measures, so participant bias might have been present. Participants were also all enrolled as students in a university, and therefore, results might not be generalizable to other populations. These limitations, along with the newness of this research, bring exciting opportunities for future research. First, this research should be replicated to ensure these relationships emerge within other samples. Future research would benefit from expanding on the variables we have presented here, such as other forms of stigma, additional fears of illnesses, potential chronic illness or trauma histories that might be contributing to these fears. Further, future research should explore other factors that might be at play in leading to the noted health disparities, particularly as they apply to POC.

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Table 1

Hierarchical Regression Predicting Health Orientation

Step	Variable	Coeff.	*SE*	*t*	*p*
1	Family history of chronic illness	-.160	9.20	-1.99	.048
		$F(1,150) = 3.96$ $p = .048$, $R^2 = .026$			
2	Race	-.114	9.62	-1.46	.147
	Cancer Fear	.255	.56	3.23	.002
	Stigma of chronic illness	.030	5.87	.381	.704
		$F(4,151) = 4.39$ $p = .002$, $R^2 = .107$			