

RESEARCH REPORT

Selection BIAS: Stereotypes and Discrimination Related to Having a History of Cancer

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Although great strides have been made in increasing equality and inclusion in organizations, a number of stigmatized groups are overlooked by diversity initiatives, including people with a history of cancer. To examine the workplace experiences of these individuals in selection contexts, we conducted 3 complementary studies that assess the extent to which cancer is disclosed, the stereotypes associated with cancer in the workplace, and discrimination resulting from these stereotypes. In a pilot study, we surveyed 196 individuals with a history of cancer (across 2 samples) about their workplace disclosure habits. In Study 1, we explored stereotypes related to employees with a history of cancer using the framework outlined by the stereotype content model. In Study 2, we used a field study to assess the experiences of job applicants who indicated they were “cancer survivors” (vs. not) with both formal and interpersonal forms of discrimination. This research shows that cancer is disclosed at relatively high rates (pilot study), those with a history of cancer are stereotyped as being higher in warmth than competence (Study 1), and the stereotypes associated with those who have had cancer result in actual discrimination toward them (Study 2). We discuss the theory behind these findings and aim to inform both science and practice with respect to this growing workplace population.

Keywords: cancer survivorship, stereotype content model, occupational health, discrimination, selection

Organizations have made great strides in increasing equality and inclusion initiatives, but at least one hurdle that remains is the exclusion of people with potentially stigmatizing health conditions (Ball, Monaco, Schmeling, Schartz, & Blanck, 2005). The focus of the current research is on reactions to one such health condition, namely, having a history of cancer. Recent estimates indicate that 14 million individuals with a history of cancer are alive in the United States today, a figure that is projected to grow to 19 million over the next 10 years (de Santis et al., 2014). Importantly, approximately 40% of individuals with a history of cancer are of working age (Equal Employment Opportunity Commission, 2011). Thus, these individuals make up a sizable portion of prospective

employees, coworkers, subordinates, and managers, highlighting the importance of understanding the manifestation of discrimination in selection contexts for individuals with a history of cancer. Indeed, individuals with a history of cancer are at a greater risk of unemployment than their healthy counterparts (de Boer, Taskila, Ojajarvi, van Dijk, & Verbeek, 2009; de Boer, Verbeek, & van Dijk, 2006).

The present research examines how stereotypes associated with a history of cancer influence return-to-work experiences. This research extends the current literature in several ways. First, the extant workplace cancer research does not examine the theoretical reasons that might explain why individuals with a history of cancer may receive differential treatment in the workplace. To address this gap in the literature, we draw upon the stereotype content model (SCM), which points to stereotypes of competence and warmth (Cuddy, Fiske, & Glick, 2007; Fiske, Cuddy, Glick, & Xu, 2002). Within this framework, we argue that individuals with a history of cancer will elicit ambivalent stereotypes—higher in warmth than competence—which will manifest in specific behavioral reactions from potential employers. Second, we focus on the workplace context to examine how the tenets of the SCM influence employees who have a history of cancer. We argue that although perceptions of warmth may be attributed to people with a history of cancer, competence is more important than warmth in work-

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place contexts. Moreover, within the SCM framework, we anticipate that perceptions of relatively higher warmth than competence will lead to specific behaviors, including passive harm. Third, the existing SCM research relies upon correlational studies or experiments in which hypothetical scenarios or target groups are utilized. The present research extends this work by utilizing an experimental field research design in which individuals apply for actual jobs and interact with actual hiring personnel. As a whole, the present research addresses a growing problem of potential workplace discrimination as a result of a history of cancer and advances knowledge about the SCM in organizational settings.

The SCM and Individuals With a History of Cancer

The SCM (Fiske et al., 2002; Fiske, Xu, Cuddy, & Glick, 1999) articulates two important orthogonal dimensions of stereotypes—perceptions of warmth and competence—which account for the majority of variance in global impressions of others (Wojciszke, Abele, & Baryla, 2009). In general, groups with goals that are incompatible with one another represent threats to resources and thus are stereotyped as being relatively low in warmth (Caprariello, Cuddy, & Fiske, 2009). The warmth dimension captures perceptions of a target's benevolent intentions and tends to be measured by traits such as morality, trustworthiness, sincerity, kindness, and friendliness. The competence dimension captures perceptions of a target's ability to carry out benevolent (or lack thereof) intentions and is measured by traits such as efficacy, skill, creativity, confidence, and intelligence. Groups that are stereotyped as being relatively high in status are assumed to be more competent than those that are relatively low in status, because of the link between status and power to control resources (Caprariello et al., 2009) and the (often erroneous) assumption that status is because of ability (Fiske et al., 2002). These propositions have been tested and replicated across many samples, using survey and experimental methodologies, focused on both authentic and manipulated outgroups, and in many diverse cultures (for a review, see Cuddy, Fiske, & Glick, 2008). It is important to highlight that although previous studies use verbiage such as “high in warmth and low in competence,” the way that these constructs are operationalized and measured suggests that it is the relative perceptions of warmth and competence—rather than actual mean scores—that determine outcomes.

Little research has focused on stereotypes associated with having a history of cancer. Cho, Smith, et al.'s (2013) work reveals that people believe it is difficult to treat cancer despite medical advances (58.4%), that it is very difficult to regain one's health after a cancer diagnosis (55.8%), that individuals with a history of cancer would not be able to make contributions to society (71.8%), and that the working ability of these individuals would be reduced even after treatment (56.1%). This suggests that low levels of competence may be attributed to a history of cancer. Additionally, individuals with a history of cancer are believed to be more appreciative of life because of their experiences with cancer (Stanton, 2006), suggesting that these individuals may be seen as warm. Indeed, this notion is supported by retrospective research in which individuals with a history of cancer report more positive interpersonal relationships as a result of their experiences with cancer, possibly because they seek more meaningful and healthier relationships (e.g., Stanton, Bower, & Low, 2006). Other research that

compares those with a history of cancer to matched controls without a history of cancer suggests that individuals with a history of cancer report having closer interpersonal relationships with others than individuals who do not have a history of cancer (Andrykowski et al., 1996). Importantly, a recent study examined the perceptions of warmth and competence of individuals with (vs. without) a history of cancer and found the former were rated higher in warmth and lower in competence (Clément-Guillot, Falzon, & d'Arripe-Longueville, 2014). Thus, the SCM provides a useful tool to understand the stereotypes associated with people with a history of cancer in the workplace.

A particular strength of the SCM is its ability to predict attitudinal reactions to groups based on the stereotypes associated with those groups. For example, groups that are perceived as being more warm than competent tend to elicit paternalistic attitudes from others because of assumptions that these groups are noncompetitive and incapable of causing harm. As a result, members of these groups are seen as kind or friendly and tend to elicit feelings of pity and sympathy related to the perception that they are not responsible for their negative outcomes (Weiner, 1985). Examples of these groups include individuals with intellectual or physical disabilities, “traditional” women, and elderly individuals (Fiske et al., 2002). Consistent with these findings, Cho, Choi, et al. (2013) found that the majority of participants agreed that cancer survivors should be protected in society (56.6%). These paternalistic attitudes are further evidence that individuals with a history of cancer are likely to be perceived to be higher in warmth than in competence.

In summary, the limited research on stereotypes related specifically to individuals with a history of cancer suggests that these stereotypes include perceptions that they are less healthy (and thus less competent); experience a greater appreciation for interpersonal relationships (and thus are more warm); and elicit paternalistic, protective attitudes from others, which tend to result from perceptions of higher warmth than competence. Thus, we predict the following:

Hypothesis 1: Cancer survivors will be rated higher in perceived warmth than in perceived competence.

Linking the SCM to Discriminatory Behavior Toward Individuals With a History of Cancer

In day-to-day interactions, judgments of warmth tend to be prioritized over judgments of competence because warmth—the benevolent or malevolent intentions of others—is more critical to interpersonal interactions (Cuddy et al., 2007, 2008). However, Cuddy, Glick, and Beninger (2011) argue that judgments of competence are likely prioritized over warmth in organizational contexts because the primary goal of most organizations is to recruit, select, and maintain a highly competent workforce. Thus, in organizational contexts, perceptions of competence, and not warmth, should more strongly dictate behavioral responses toward outgroups. The Behaviors from Intergroup Affect and Stereotypes (BIAS) Map (Cuddy et al., 2007) is an extension of the SCM that links warmth and competence stereotypes to specific behaviors. The BIAS Map predicts that perceptions of competence predict passive (e.g., covert, less intense, avoidant) rather than active (e.g., direct, explicit, overt) behaviors (Cuddy et al., 2007, 2008). The level of perceived competence will predict whether these passive behaviors are harmful or facilitative. Harmful behaviors include

those that lead to detrimental outcomes for outgroups, whereas facilitative behaviors include those that lead to favorable outcomes for outgroups (Cuddy et al., 2007).

Given that stereotypes linked to a history of cancer suggest low competence (relative to warmth), a history of cancer should elicit passive harm behaviors in organizational contexts (Cuddy et al., 2007). Examples of passive harm behaviors include “avoiding eye contact, being dismissive, and ignoring” others (Cuddy et al., 2008, p. 109). Although subtle, these behaviors can constitute “consequential forms of discrimination (e.g., passive segregation, failure to hire members of a specific group)” (Cuddy et al., 2007). For example, Cuddy, Fiske, and Glick (2004) found that working mothers, stereotyped as being higher on warmth than in competence, were more likely to experience passive harm behaviors including reduced likelihood of being hired, promoted, or receive developmental training, which are all characterized as acts of relatively passive acts of omission.

The present research focuses on three important phases of the selection process: interacting with hiring personnel, being allowed to submit an application, and receiving inquiries from hiring personnel to pursue employment (e.g., callbacks for interviews in response to applications; Hebl, Foster, Mannix, & Dovidio, 2002). Each of these contexts may elicit passive harm behaviors from hiring personnel, as characterized by the BIAS Map (Cuddy et al., 2007). Specifically, we propose the following:

Hypothesis 2: Hiring personnel will engage in more passive harm behaviors toward applicants with a history (vs. no history) of cancer. These behaviors include negative interpersonal interactions (Hypothesis 2a), communicating lower job availability (Hypothesis 2b), and engaging in fewer callbacks (Hypothesis 2c) compared with applicants without a history of cancer.

In the present research, two studies test the role of discrimination (passive harm) directed toward those with a history of cancer in selection contexts by taking a three-pronged approach. We first present the results of a pilot study that examines whether people with a history of cancer elect to disclose this history in selection contexts. In Study 1, we then present data that examines the nature of stereotypes of cancer history in workplace settings. In Study 2 we investigate the ways that discrimination toward those with a history of cancer manifests in actual selection scenarios.

Pilot Study: Do Individuals With a History of Cancer Disclose in the Workplace?

We began by examining, across two samples, whether individuals with a history of cancer actually disclose in selection contexts. All participants were at least 18 years of age, lived in the United States, and identified as “cancer survivors who are working part- or full-time.” Eighty participants were recruited via Amazon Mechanical Turk (MTurk) and compensated \$0.40. We recruited an additional 112 participants at a Susan G. Komen fun-run event. Descriptive statistics of these two samples are provided in Table 1.

Table 2 provides a summary of the specific questions and responses collected across both samples. Most participants indicated that they either would disclose or had previously disclosed their cancer histories in selection contexts. Common reasons for disclosure included health-related concerns, a desire to be forth-

Table 1
Descriptive Statistics for the Two Pilot Study Samples

	Mechanical Turk		Susan G. Komen race	
	<i>n</i> (%)	<i>M</i> (<i>SD</i>)	<i>n</i> (%)	<i>M</i> (<i>SD</i>)
Total sample	80 (100%)		112 (100%)	
Age		38.59 (12.02)		53.30 (10.11)
Gender				
Male	35 (44%)		2 (2%)	
Female	34 (43%)		109 (97%)	
Not reported	11 (14%)		1 (1%)	
Race/ethnicity				
White	57 (71%)		54 (48%)	
Black	3 (4%)		32 (29%)	
Hispanic	8 (10%)		21 (19%)	
Asian	3 (4%)		2 (2%)	
Not reported	9 (11%)		3 (3%)	
Diagnosis age		29.79 (12.69)		44.41 (10.53)
Years in remission		—		7.00 (5.84)
Years of work experience		—		28.07 (11.98)

right with interviewers, being directly asked about cancer, or wanting to communicate that they were stronger as a result of their cancer histories. Our initial results confirm that individuals with a history of cancer do disclose, and at fairly high rates. We now explore the stereotypes associated with individuals with a history of cancer in workplace contexts (Study 1) and how these stereotypes may affect actual hiring scenarios (Study 2).

Study 1: What Are the Stereotypes Associated With Cancer Survivorship?

In this study, we assess ratings of warmth and competence attributed to people with a history of cancer. In addition, we compare the ratings of people with a history of cancer to other groups identified in previous SCM research (Fiske et al., 2002; see also Clement-Guillotin et al., 2014). Specifically, we focus on a noncollege sample within the United States, and we compare the ratings of warmth and competence for individuals with a history of cancer to ratings for White, Asian, and “poor” individuals. These groups were chosen because they consistently represent the high-warmth/high-competence, low-warmth/high-competence, and low-warmth/low-competence quadrants outlined in the SCM in previous research (Fiske et al., 2002), respectively.

Method

Participants. Participants were 87 individuals recruited via MTurk. Of these, 15 were removed because they did not provide any variation in responses. On average, participants were 38.83 years ($SD = 13.29$ years), the majority (54.90%) were employed full time, and many had management experience (52.80%) and/or experience as an interviewer (41.70%).¹

¹ We also conducted the analyses reported in this study using only individuals with management experience and using only individuals with interviewing experience. Neither of these restrictions resulted in substantively different results for any analyses.

Table 2
Frequencies and Percentages of Disclosure Behaviors in Selection Contexts

	Never disclose	In some situations	Always disclose	Unrelated responses
Mechanical Turk				
If you were to apply for a new position, under what conditions might you disclose your cancer history to the interviewer?	23 (29%)	43 (54%)	4 (5%)	11 (12%)
Please tell us about a time in the past when you disclosed your cancer history in an interview context.	31 (39%)	48 (61%)	—	—
Susan G. Komen race				
If you were to apply for a new position, under what conditions might you disclose your cancer history to the interviewer?	28 (25%)	39 (35%)	38 (34%)	7 (6%)

Procedure. Participants took part in an online survey and provided their opinions regarding “perceptions of individuals.” They were asked to “respond honestly as to how most people in society feel about individuals who have been diagnosed with, treated for, and survived cancer” with respect to certain characteristics. To assess workplace-specific stereotypes, we added “in the workplace” to the stem of each item. Perceived competence and warmth were measured using nine items (competence: competent, confident, independent, competitive, intelligent; warmth: tolerant, warm, good natured, sincere) on a 5-point rating scale (1 = *not at all*, 5 = *very much so*) from Fiske et al. (2002). To compare with other groups in the SCM framework, participants responded to the same questions in reference to White, Asian, and poor individuals.

Results and Discussion

An initial exploratory principal components factor analysis of the nine cancer items using promax rotation yielded two distinct factors that accounted for 63.16% of the total variance. The two factors replicated Fiske et al.’s (2002) distinction between warmth ($\alpha = .80$) and competence ($\alpha = .84$). All factor loadings exceeded .60, with no cross-loading across factors. Reliabilities for the warmth and competence items with respect to the other three groups all exceeded .61.

Following Fiske et al.’s (2002) procedure to establish within-group differences along the two dimensions of competence and warmth, a paired samples *t* test was used to compare the perceptions of competence and warmth with respect to those with a history of cancer. In support of Hypothesis 1, these individuals with a history of cancer were rated higher in warmth ($M = 3.96$, $SD = 0.63$) than in competence ($M = 3.54$, $SD = 0.73$), $t(65) = 4.57$, $p < .001$, $d = 0.56$.

We next compared those with a history of cancer with people representing other quadrants. As expected, those with a history of cancer were rated higher in warmth than White individuals ($M = 3.26$, $SD = 0.75$), $t(53) = 5.44$, $p < .001$, $d = 0.74$, and lower in competence than White individuals ($M = 4.08$, $SD = 0.50$), $t(53) = 4.03$, $p < .001$, $d = 0.63$. Individuals with a history of cancer were rated higher in warmth than Asians ($M = 3.14$, $SD = 0.91$), $t(55) = 5.56$, $p < .001$, $d = 0.74$, and lower in competence than Asians ($M = 4.32$, $SD = 0.50$), $t(55) = 6.50$, $p < .001$, $d = 0.87$. Those with a history of cancer also were rated higher in warmth than poor people ($M = 3.01$, $SD = 0.92$), $t(54) = 6.83$, $p < .001$, $d = 0.92$, and higher in competence than poor people ($M = 2.12$, $SD = 0.75$), $t(54) = 10.99$, $p < .001$, $d = 1.48$.

The results of Study 1 suggest that, in line with the SCM, individuals with a history of cancer are rated higher in warmth than they are in competence. Furthermore, warmth and competence ratings from previous SCM research confirm that people with a history of cancer are best classified in the high-warmth/low-competence quadrant. Thus, corresponding with prior conceptualizations of SCM categories, we classify individuals with a history of cancer in the high-warmth/low-competence quadrant of the SCM.

Study 2: What Behaviors Result From Cancer Stereotypes?

We now focus on how the content of these stereotypes may manifest as discriminatory behaviors against individuals with a history of cancer in actual hiring scenarios using a field study. Based upon our review of the SCM, BIAS Map, and organizational contextual factors, we predicted that individuals with a history of cancer would receive passive harm behaviors.

Method

Participants and research confederates. Participants were 121 managers of retail stores at three large shopping malls in a major metropolitan city in the southern United States. The only demographic information recorded of the managers was gender (65% female). Five research confederates (two male and three female) served as applicants. All of these confederate applicants were between 21 and 29 years of age. For each study trial, applicants were assigned randomly to disclose a history of cancer or provide no information about a history of cancer. Prior to data collection, we confirmed that each store was currently hiring and we excluded stores that utilized a completely online application process. Finally, applicants were assigned randomly to each store and only one applicant entered any given store.

Manipulations and training.

Manipulation of cancer status. The confederates presented resumes to managers that included their actual employment experiences. The resumes were adjusted to fit the work history and job requirements appropriate for an individual applying to a sales associate position at a retail store by omitting any overqualifications and irrelevant work experiences, and were standardized across confederates for length, formatting, and level of experience or impressiveness.

In the experimental condition, confederates wore hats and provided resumes that disclosed cancer survivor status. The resumes included the following statement, "Please note: There is a gap in my employment because I was diagnosed and treated for cancer. I have been in remission for one year" and the hat had the words "Cancer Survivor" depicted across the front. In the control condition, the resume provided no extra information and participants wore a plain white hat. Finally, it is important to note that all confederates served as their own control—they entered some stores wearing the "Cancer Survivor" hat and other stores with the plain white hat. Confederate applicants remained blind to condition.

Training and standardization. The confederates received extensive training in order to standardize the interactions. In addition, the confederates asked four standard questions of all managers: (a) "Are you hiring right now?"; (b) "Can I fill out an application?"; (c) "What sorts of things would I be doing if I worked here?"; and (d) "When should I expect to hear from you?" The confederates did not deviate from this predetermined script unless the manager had follow-up questions, in which case the confederate was to act naturally but not overengage.

Procedure. The experimental paradigm for the present study was one adapted from previous organizational field research (Hebl et al., 2002; Singletary & Hebl, 2009). Before entering each store, a research assistant placed a hat on the confederate's head and handed them the corresponding resume. To remain blind to condition, confederates did not look at the resume and avoided reflective surfaces. Upon entering each store, confederates asked to speak with a manager and then asked the four standardized questions. If the manager stated that the store was hiring, the confederate took an application and left a resume with the manager. Conversely, if the manager indicated the store was not hiring, the confederate thanked them, exited the store, and noted this response on a rating form that also included the focal dependent variables. All applications were completed in a standardized way and returned the same day. If managers contacted the confederate regarding the position, the confederates politely indicated that they were appreciative of the response but were no longer seeking employment.

Measures.

Interpersonal interactions. Passive harm was measured with items used in previous field research assessing subtle interpersonal discriminatory behaviors (e.g., Hebl et al., 2002). Confederate job applicants evaluated the manager on 13 dimensions: friendliness (reverse coded [R]), eye contact (R), smiling (R), helpfulness (R), level of interest (R), comfort (R), nodding (R), rudeness, pursing lips, negative brow furrowing, hostility, and nervousness. Each item was rated on a 7-point Likert scale (1 = *not at all*, 7 = *very much*). These variables showed high reliability ($\alpha = .92$), and were averaged into one composite, Passive Harm, with higher ratings indicating more negative interpersonal behaviors.

Application. For each applicant, we noted whether or not the employer indicated that there was an open position available and allowed the applicant to submit an application.

Callbacks. For each applicant, we noted whether or not the employer called the applicant to offer them a job within a 3-month period of time following the initial data collection.

Results and Discussion

None of the managers specifically mentioned the applicant's hat during the interactions. An analysis of variance examining the effects of individual applicants revealed no statistically significant differences on ratings of Passive Harm as a result of individual confederates, $F(4, 116) = 1.18, p > .05, \eta^2 = .04$, or confederate gender, $F(1, 119) = 2.46, p > .05, \eta^2 = .02$. Similar tests revealed that there were not systematic effects related to the particular mall, $F(2, 118) = 1.712, p > .05, \eta^2 = .03$, or type of store, $F(2, 118) = 0.10, p > .05, \eta^2 < .001$, that was visited. Thus, we collapse across confederates, confederate gender, mall, and store type in further analyses.

Passive harm. Consistent with Hypothesis 2a, applicants in the cancer disclosure condition reported significantly more passive harm from the hiring personnel ($M = 3.21, SD = .97$) compared with applicants in the control condition ($M = 2.34, SD = 0.81$), $F(1, 119) = 30.89, p < .001, \eta^2 = .21$.

Application. Hypotheses 2b and 2c were evaluated using Fisher's exact test, which provides the statistical significance of differences for contingency tables in which the actual (rather than inferred from a larger population) phenomenon of interest is available. There were no differences as a function of condition in the number of managers offering prospective applicants an opportunity to apply for the job (one-sided Fisher's exact test, $p = .39$). Specifically, six stores indicated that they were not hiring in the control condition and eight stores indicated they were not hiring in the cancer disclosure condition. Hence, although the pattern of data is in the predicted direction, Hypothesis 2b was not supported.

Callbacks. Consistent with Hypothesis 2c, prospective applicants in the cancer disclosure condition received fewer callbacks from hiring personnel ($n = 13$; 21.3%) than those in the control condition ($n = 22$; 36.7%; one-sided Fisher's exact test, $p = .05$).

The results of Study 2 revealed that individuals with a history of cancer were treated with higher levels of passive harm (worse interpersonal treatment, fewer callbacks) by managers. However, these individuals *were* allowed to apply for jobs at comparable levels, a finding that is contrary to predictions but perhaps in line with legal concerns. The differences in passive harm are striking, given that the interactions were highly structured (because of the standardized training the confederates received) and short in length. These findings cannot be attributed to demand characteristics or self-fulfilling prophecy, as the confederates were blind to the manipulation in each encounter.

General Discussion

The purpose of the present research was to examine the return-to-work experiences of individuals with a history of cancer. Although past research suggests that these individuals are prone to higher incidences of unemployment (de Boer et al., 2006, 2009), little is known about the psychological mechanisms that may explain this phenomenon in selection contexts. Our pilot study demonstrated that individuals with a history of cancer often decide to disclose this fact to interviewers. Study 1 demonstrated that the stereotypes associated with these individuals include perceptions that they are higher in warmth than competence. Finally, Study 2 demonstrated that, in accordance with the tenets of the SCM and BIAS Map, applicants that ostensibly had a history of cancer received more passive harm behaviors from store personnel, in-

cluding worse interpersonal treatment (Hebl et al., 2002) and fewer callbacks compared with applicants that did not report a history of cancer.

Theoretical and Practical Implications

The present research adds to a relatively small body of literature focused on the psychosocial aspects of cancer survivorship in the workplace and suggests that the stereotypes associated with cancer history may be at least partially responsible for the lower employment rates reported in other studies. By utilizing an experimental field research paradigm, we can rule out that alternative explanations (such as changing priorities regarding employment and individuals deciding not to return to work after treatment; see Mols, Thong, Vreugdenhil, & van de Poll-Franse, 2009) account for differences in rates of employability.

Our methodology also provides an extension of the SCM and BIAS Map scholarship. Although past studies have utilized experimentation to test the predictions of the SCM, most have relied upon hypothetical situations or target groups (Caprariello et al., 2009). By collecting data in actual organizational settings among managers who were unaware that they were being exposed to manipulations, we provide evidence that the propositions of the SCM manifest in the “real world.” Moreover, the BIAS Map predicts two possible behaviors in response to a given outgroup, yet does not describe when one behavior is more likely than another. We proposed that the workplace context would encourage more passive (rather than active) behavioral responses. Taking the context into account will likely prove to be a lucrative area of future SCM research, particularly in predicting which behaviors are likely to be elicited in response to different outgroups.

In terms of practical implications, it seems counterintuitive that individuals with a history of cancer would choose to willingly disclose information that may make them more vulnerable to discrimination. Indeed, hiring personnel in Study 2 made fewer callbacks and displayed more negative interpersonal reactions to individuals who displayed a history with cancer than those who did not, despite the fact that applicant qualifications and behaviors were standardized. This lower rate of callbacks is evidence of systematic exclusion based on history of cancer, which can leave employers at risk of biased selection decisions and potential litigation. Thus, hiring personnel should be mindful to base such decisions on performance-related characteristics only.

Despite this discrimination, our pilot study showed that individuals do choose to disclose a cancer history in selection contexts. This may be related to the fact that a diagnosis of cancer and the experience of undergoing treatment and recovery are often very traumatic events, and many of these individuals can come to incorporate their histories with cancer as a central parts of their self-concepts (see Parry & Chesler, 2005; Zebrack, 2000). Given that these individuals may feel compelled to disclose in selection or other workplace contexts, it is important for leaders within organizations to be prepared to handle such disclosures. An interviewer that allowed a disclosure of cancer history to impact decisions to hire an applicant that is otherwise capable of performing the job would be at risk of making suboptimal selection decisions and litigation for violating the tenets of the *Americans with Disabilities Act* (1990).

Furthermore, engaging in negative interpersonal behaviors like we found in Study 2 could create a self-fulfilling prophecy among applicants in which they perceive negativity from hiring personnel and thus form negative impressions about the job. This negative impression would then be communicated to hiring personnel, who would determine that they are either not interested in the job or would not be a good fit for the organization. It has been shown that these negative interpersonal interactions can indeed affect interview performance, giving hiring personnel justified reasons to not hire the applicant (Word, Zanna, & Cooper, 1974).

Finally, there are implications for individual employees with a history of cancer. The present research suggests that the perceived competence of these potential employees may be a barrier to employment. Thus, individuals with a history of cancer may be able to allay concerns about their competence by highlighting positive aspects about their experiences and specifically addressing concerns employers may have.

Limitations and Future Directions

We presumed that employers perceived that our control applicant did not have a history of cancer. Similarly, we have conceptualized the discrimination experienced by the applicant in the experimental condition to emerge as a result of the applicant’s history of cancer. However, it may be the case that this discrimination emerged as a result of *disclosing* a history of cancer. The present research does not allow us to differentiate between these hypotheses. This is a problem inherent to any stigmatizing characteristic that is concealable—one can avoid prejudice and discrimination related to the characteristic if one is able to conceal it and does not disclose its presence. Hence, the present research adds to the growing literature on the double bind of the negative implications of both concealing and revealing concealable stigmas. The present findings stand in contrast to a growing body of work suggesting the benefits that some groups receive from explicitly acknowledging their stigmas (e.g., Singletary & Hebl, 2009). Future research will benefit from continuing to explore the implications of concealing versus disclosing a history of cancer, especially considering the relatively high rates of disclosure found in our pilot study.

Future research would benefit from continuing to explore health-related stigma in the workplace. The present research did not specify the type of cancer experienced by the applicant, which may constitute a fruitful avenue of future research, particularly if the cancer is perceived to be the result of controllable factors (e.g., a smoker’s lung cancer; Weiner, 1985).

Conclusion

Although diversity efforts have increased over the past decade, health characteristics are often not included in these programs. Individuals with a history of cancer make up a large proportion of the potential workforce, and return to work has tremendous economic and psychological benefits for these individuals (e.g., Bradley & Bednarek, 2002). Hence, it will be essential for organizations to address discrimination related to cancer history (and other health outcomes) in interventions designed to create equity in hiring practices.

References

- Americans with Disabilities Act of 1990, Pub. L. No. 101-336, 104 Stat 328 (1990).
- Andrykowski, M. A., Curran, S. L., Studts, J. L., Cunningham, L., Carpenter, J. S., McGrath, P. C., . . . Kenady, D. E. (1996). Psychosocial adjustment and quality of life in women with breast cancer and benign breast problems: A controlled comparison. *Journal of Clinical Epidemiology*, *49*, 827–834. [http://dx.doi.org/10.1016/0895-4356\(96\)00028-5](http://dx.doi.org/10.1016/0895-4356(96)00028-5)
- Ball, P., Monaco, G., Schmeling, J., Scharz, H., & Blanck, P. (2005). Disability as diversity in Fortune 100 companies. *Behavioral Sciences & the Law*, *23*, 97–121. <http://dx.doi.org/10.1002/bsl.629>
- Bradley, C. J., & Bednarek, H. L. (2002). Employment patterns of long-term cancer survivors. *Psycho-Oncology*, *11*, 188–198. <http://dx.doi.org/10.1002/pon.544>
- Caprariello, P. A., Cuddy, A. J., & Fiske, S. T. (2009). Social structure shapes cultural stereotypes and emotions: A causal test of the stereotype content model. *Group Processes & Intergroup Relations*, *12*, 147–155. <http://dx.doi.org/10.1177/1368430208101053>
- Cho, J., Choi, E. K., Kim, S. Y., Shin, D. W., Cho, B. L., Kim, C. H., . . . Park, J. H. (2013). Association between cancer stigma and depression among cancer survivors: A nationwide survey in Korea. *Psycho-Oncology*, *22*, 2372–2378. <http://dx.doi.org/10.1002/pon.3302>
- Cho, J., Smith, K., Choi, E. K., Kim, I. R., Chang, Y. J., Park, H. Y., . . . Shim, Y. M. (2013). Public attitudes toward cancer and cancer patients: A national survey in Korea. *Psycho-Oncology*, *22*, 605–613. <http://dx.doi.org/10.1002/pon.3041>
- Clément-Guillotin, C., Falzon, C., & d'Arripe-Longueville, F. (2014). Can exercise change the stereotypes associated with individuals with cancer? *Scandinavian Journal of Medicine & Science in Sports*. Advance online publication. <http://dx.doi.org/10.1111/sms.12272>
- Cuddy, A. J. C., Fiske, S. T., & Glick, P. (2004). When professionals become mothers, warmth doesn't cut the ice. *Journal of Social Issues*, *60*, 701–718. <http://dx.doi.org/10.1111/j.0022-4537.2004.00381.x>
- Cuddy, A. J. C., Fiske, S. T., & Glick, P. (2007). The BIAS map: Behaviors from intergroup affect and stereotypes. *Journal of Personality and Social Psychology*, *92*, 631–648. <http://dx.doi.org/10.1037/0022-3514.92.4.631>
- Cuddy, A. J. C., Fiske, S. T., & Glick, P. (2008). Warmth and competence as universal dimensions of social perception: The stereotype content model and the BIAS map. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (pp. 61–149). New York, NY: Academic Press.
- Cuddy, A. J. C., Glick, P., & Beninger, A. (2011). The dynamics of warmth and competence judgments, and their outcomes in organizations. *Research in Organizational Behavior*, *31*, 73–98. <http://dx.doi.org/10.1016/j.riob.2011.10.004>
- de Boer, A. G., Taskila, T., Ojajärvi, A., van Dijk, F. J., & Verbeek, J. H. (2009). Cancer survivors and unemployment: A meta-analysis and meta-regression. *JAMA: Journal of the American Medical Association*, *301*, 753–762. <http://dx.doi.org/10.1001/jama.2009.187>
- de Boer, A. G., Verbeek, J. H., & van Dijk, F. J. (2006). Adult survivors of childhood cancer and unemployment: A metaanalysis. *Cancer*, *107*, 1–11. <http://dx.doi.org/10.1002/cncr.21974>
- de Santis, C. E., Chun, C. L., Mariotto, A. B., Siegel, R. L., Stein, K. D., & Kramer, J. L., . . . Jemal, A. (2014). Cancer treatment and survivorship statistics, 2014. *CA: A Cancer Journal for Clinicians*, *64*, 252–271. <http://dx.doi.org/10.3322/caac.21235>
- Equal Employment Opportunity Commission. (2011). Questions and answers about cancer in the workplace and the Americans with Disabilities Act (ADA). Retrieved from <http://www.eeoc.gov/facts/cancer.html>
- Fiske, S. T., Cuddy, A. J. C., Glick, P., & Xu, J. (2002). A model of (often mixed) stereotype content: Competence and warmth respectively follow from perceived status and competition. *Journal of Personality and Social Psychology*, *82*, 878–902. <http://dx.doi.org/10.1037/0022-3514.82.6.878>
- Fiske, S. T., Xu, J., Cuddy, A. C., & Glick, P. (1999). (Dis)respecting versus (dis)liking: Status and interdependence predict ambivalent stereotypes of competence and warmth. *Journal of Social Issues*, *55*, 473–489. <http://dx.doi.org/10.1111/0022-4537.00128>
- Hebl, M. R., Foster, J. B., Mannix, L. M., & Dovidio, J. F. (2002). Formal and interpersonal discrimination: A field study of bias toward homosexual applicants. *Personality and Social Psychology Bulletin*, *28*, 815–825. <http://dx.doi.org/10.1177/0146167202289010>
- Mols, F., Thong, M. S. Y., Vreugdenhil, G., & van de Poll-Franse, L. V. (2009). Long-term cancer survivors experience work changes after diagnosis: Results of a population-based study. *Psycho-Oncology*, *18*, 1252–1260. <http://dx.doi.org/10.1002/pon.1522>
- Parry, C., & Chesler, M. A. (2005). Thematic evidence of psychosocial thriving in childhood cancer survivors. *Qualitative Health Research*, *15*, 1055–1073. <http://dx.doi.org/10.1177/1049732305277860>
- Singletary, S. L., & Hebl, M. R. (2009). Compensatory strategies for reducing interpersonal discrimination: The effectiveness of acknowledgments, increased positivity, and individuating information. *Journal of Applied Psychology*, *94*, 797–805. <http://dx.doi.org/10.1037/a0014185>
- Stanton, A. L. (2006). Psychosocial concerns and interventions for cancer survivors. *Journal of Clinical Oncology*, *24*, 5132–5137. <http://dx.doi.org/10.1200/JCO.2006.06.8775>
- Stanton, A. L., Bower, J. E., & Low, C. A. (2006). Posttraumatic growth after cancer. In L. G. Calhoun & R. G. Tedeschi (Eds.), *Handbook of posttraumatic growth: Research and practice* (pp. 138–175). Mahwah, NJ: Erlbaum.
- Weiner, B. (1985). An attributional theory of achievement motivation and emotion. *Psychological Review*, *92*, 548–573. <http://dx.doi.org/10.1037/0033-295X.92.4.548>
- Wojciszke, B., Abele, A. E., & Baryla, W. (2009). Two dimensions of interpersonal attitudes: Liking depends on communion, respect depends on agency. *European Journal of Social Psychology*, *39*, 973–990. <http://dx.doi.org/10.1002/ejsp.595>
- Word, C. O., Zanna, M. P., & Cooper, J. (1974). The nonverbal mediation of self-fulfilling prophecies in interracial interaction. *Journal of Experimental Social Psychology*, *10*, 109–120. [http://dx.doi.org/10.1016/0022-1031\(74\)90059-6](http://dx.doi.org/10.1016/0022-1031(74)90059-6)
- Zebrack, B. J. (2000). Cancer survivor identity and quality of life. *Cancer Practice*, *8*, 238–242. <http://dx.doi.org/10.1046/j.1523-5394.2000.85004.x>

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