Exploring the employment challenges and concerns of minority women cancer survivors

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ABSTRACT

Employment plays an essential role in cancer survivorship. The study emerged from needs identified by community partners who voiced concerns about employment-related issues encountered by cancer survivors. Thus, the purpose of this exploratory study is to understand the experiences of minority women cancer survivors after cancer. We explore how type of occupation shapes the employment status of minority women cancer survivors after treatment. A community-based purposive sample of diverse cancer survivors (n=57) who reported working shortly before being diagnosed with cancer were administered a semi-structured questionnaire. Close-ended responses were analyzed using descriptive statistics. Open-ended responses were analyzed using applied thematic analysis techniques as well a Crisp Set Qualitative Comparative Analysis (QCA). Work-related concerns were similar across occupation types, while disparities were observed in reported job loss rates after diagnosis and employment rates after treatment. Women's concerns related to productivity losses at work due to treatment side effects, disease management issues, fear of job loss, and economic concerns. The QCA pathway that appeared to best explain the outcome of working after treatment completion included the following components: working during treatment, having employer-based health insurance and being eligible for medical leave (perception of). This study provides relevant insights on the work experience and concerns of minority women cancer survivors, a population segment that has been frequently underrepresented in the literature on survivors' work outcomes after cancer diagnosis and treatment.

KEYWORDS: Cancer disparities, minorities, employment, work

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Introduction

Progress in cancer research and treatment has led to an increased number of survivors and a consequential need to address disease management and quality of life after diagnosis (Hoffman, 2005). Previous studies on survivorship have shown that achieving a sense of normalcy includes resuming activities carried out before diagnosis such as maintaining/obtaining employment (Kennedy, Haslam, Munir, & Pryce, 2007; Spelten, Sprangers, & Verbeek, 2002), which also has a positive influence on wellbeing (Clarke et al., 2015). Employment plays an essential role in cancer survivorship because of the benefits it provides including income, better psychosocial health, and possibly employer-based health insurance (Amir, Neary, & Luke, 2008; Main, Nowels, Cavender, Etschmaier, & Steiner, 2005; Nachreiner et al., 2007). Multiple factors affect the likelihood that women employed at time of diagnosis will work after cancer treatment, including federal, state, and employer policies; work environment; short and long-term and late effects of cancer treatment; and individual factors (Mehnert, 2011). Direct physical impacts of disease, such as pain and fatigue, as well as treatment side effects may impair the survivors' ability to work (Amir, Neary, & Luke, 2008; Jagsi et al., 2014). Co-workers support and general positive workplace climate can also influence the likelihood of return to work or continuance of employment during and after cancer treatment (Bradley & Wilk, 2014; Islam et al., 2014; Pryce, Munir, & Haslam., 2007). Characteristics of the work environment, such as type of occupation, level of physical demands, and work schedule flexibility, also influence job-related outcome (Bouknight, Bradley, & Luo, 2006; Islam et al., 2014; Spelten, Sprangers, & Verbeek, 2002). Thus, understanding how work after cancer diagnosis can differ across employment conditions is crucial.

While literature exists on the work-related outcomes among women cancer survivors in general (Mehnert, de Boer, & Feuerstein, 2013), research that examines the work outcomes (employment status) for racial and ethnic minority women is limited (Blinder et al.. 2012; Bouknight, Bradley, & Luo, 2006; Bradley, Neumark, Luo, & Schenk, 2007; Bradley, & Wilk, 2014; Mujahid et al., 2011; Mujahid et al., 2010). Although the evidence is not uniform (Bradley & Wilk, 2014), studies generally indicate that minority survivors experience greater financial problems attributable to a cancer diagnosis and its treatment than European American women (Jagsi et al., 2014). Moreover, minority women may experience racial and ethnic discrimination that further disadvantage them in the workplace. Still, our overall understanding of minority survivors' work experiences following diagnosis remains inadequate. The purpose of this study is to understand the experiences of minority women cancer survivors in relation to work and the factors contributing to their employment status after treatment (regardless of type of employment). The study emerged from needs identified by community partners who voiced concerns about employment-related issues encountered by the cancer survivors they worked with. The analysis explores how type of occupation and employment benefits (medical leave, insurance) contribute to shaping the employment status of women cancer survivors after diagnosis and treatment.

Materials and methods

Sample and Recruitment

Recruitment was aided by previously established and long-standing partnerships with community-based organizations that serve cancer survivors. A purposive sample of cancer survivors was recruited at two cancer survivorship workshops in West Central Florida. The events were purposefully selected as survivors who attend them are from culturally and ethnically diverse backgrounds. Participation in the study was voluntary. Each participant was presented with detailed study information verbally consented. Inclusion criteria were: being a woman who had ever been diagnosed with cancer and being 18 years old or older.

Data Collection

Based on the literature on work and cancer survivorship presented above, input from cancer survivor advocates and the authors' work with minority cancer survivors, we developed a semi-structured questionnaire comprised of 7 open-ended and 21 close-ended items. The questionnaire was pilot-tested with two cancer survivors. Information captured included time of cancer diagnosis, type of cancer and treatment, work status before diagnosis, job loss after cancer diagnosis, work status during and after cancer treatment, current work status, type of job and duties, as well as general socio-demographic data such as age, education, and income. These variables have been identified as key in influencing survivors' employment status after treatment in previous literature. The questionnaire utilized a skip pattern. Participants who reported they were working three months prior to their cancer diagnosis were directed to open-ended questions about main duties at their jobs. These participants were asked open-ended questions about work-related concerns or challenges they experienced after diagnosis. They were also directed to structured questions about their perceived eligibility to take a medical leave (yes/no); coverage by employer-based health insurance (yes/no); and job loss after diagnosis (yes/no). Participants were also asked about what type of work-related information would be helpful and whether they considered programs to support working women survivors beneficial. All participants were asked to self-rate their health using the 2002 WHO World Health Survey scale of self-rated health (Subramanian, Huijts, & Avendano, 2010). Facilitated by the Standard Occupational Classification System (Bureau of Labor Statistics, 2010), participants' occupations were placed into one of three categories: (1) management or professional; (2) services, sales and office support; and (3) construction, production and transportation. Due to the limited number of survivors whose occupations were construction, production and transportation, the latter two categories were combined for analysis, and will be referred to as "service, office support, and production." The questionnaire was designed to be self-administered. However, a few participants requested assistance and the items were read to them. The questionnaire was available in both English and Spanish. The Institutional Review Board at the [university name masked for blind review] approved this study.

Data Analysis

All questions and responses were entered into Excel. Close-ended responses were analyzed descriptively, with frequencies and proportions reported for each question. Qualitative responses to open-ended questions were systematically and iteratively coded by two bilingual research team members using applied thematic analysis techniques (Bernard, Wutich, & Ryan, 2016). A codebook was developed in Microsoft Excel that included a priori and emergent codes. The team held debriefing meetings to review and discuss the emerging themes and adjust the codebook. Illustrative quotes considered the relevance to the research questions were also identified. Qualitative data were further analyzed using Crisp Set Qualitative Comparative Analysis (QCA) to understand if certain combinations of coded factors/conditions are part of the outcome set "work after treatment completion" (work =1, non-work =0). Crisp set QCA is an analytic induction method, used to build up causal explanations of phenomena by analyzing a small number of cases (Bernard & Ryan, 2009). The QCA method was formalized by Ragin (Ragin, 1987) using a Boolean algebra approach to identify contribution of the presence or absence of certain factors to an outcome of interest. A Crisp set, or Conventional set, is dichotomous and can be compared to a binary variable with value 1 when the factor is present and 0 when it is absent (e.g., if a condition represented by a code is present or absent). Using the software fs/QCA[1], the following factors were tested in the analysis to identify which ones/ which combinations contribute to work status after having received primary treatment for cancer: medical leave eligibility (participants' perception of), availability of medical insurance through the employer (insurance status), work status while receiving primary treatment for cancer, work status after having received primary treatment, and type of occupation. The QCA applies the rules of logical inference to identify which combinations among all the possible combinations of variables found in the data contribute to the outcome of interest.

Results

The following paragraphs detail our findings. First, we present participant demographics followed by the description of work related patterns and outcomes by occupation for cancer survivors that were working before diagnosis (n=57). This is followed by participants' work-related concerns and QCA results.

Participant demographics

The researchers were able to successfully recruit 75 minority women, in a short period of time (two days). Of the 75 women cancer survivors for which data were collected, 57 reported they were working shortly before being diagnosed with cancer. The findings reported in the following paragraphs consider the results on work during and after treatment completion, current work status, and work-related challenges for the participants who stated that they were working shortly before being diagnosed with cancer (n=57).

This is a predominantly minority sample, with Hispanic participants making up the largest group, followed by Black or African American survivors. Thirty-seven percent (n=21) of participants' occupation were classified as management or professional, while 63% (n=36) of participants' jobs were classified as non-managerial/ non-professional and primarily worked in the service, sales, office support or production. Overall participants were moderately to highly educated, with the majority of participants having attended college. Eighty percent of participants in management or professional occupations had at least a college degree, compared to 26% of the participants who are in service, office support, or production occupations. Median income was between $24,000 and $47,999. Over 30% reported having had some financial difficulties in the recent past. Median income for participants in management or professional occupations was the same as participants in service, office support or

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[1] Ragin, C., and Davey, S. 2014. fs/QCA [Computer Programme], Version [2.5/3.0]. Irvine, CA: University of California.

production occupations. Seventy-one percent of the participants' report having a household income of less than $47,000 per year, even though a large proportion (68%) have attended college. Ninety-six percent of participants believed that having programs that support working women diagnosed with cancer would be beneficial.

Table 1. Socio-demographic, economic and health indicators among women employed before cancer diagnosis (n=57).

		Managerial		Service/Sales/ Production		Total n
		n=21	(%)	n=36	(%)	57
Age at interview	18-39	1	(5)	2	(8)	3
	40-54	9	(43)	14	(39)	24
	55-64	6	(29)	11	(31)	16
	65 or older	5	(24)	8	(22)	13
	Missing			1	(0)	1
Education	Less than High School Diploma	0	(0)	5	(14)	5
	High School Diploma or GED	0	(0)	11	(31)	11
	Some College, No Degree	4	(20)	10	(29)	14
	Associate/Junior College Degree	0	(0)	6	(17)	6
	Bachelor's Degree	9	(45)	3	(9)	12
	Graduate or Professional Degree	7	(35)	0	(0)	7
	Missing	1	(0)	1	(0)	2
Ethnicity* Race	Hispanic	8	(43)	25	(74)	33
	White - non Latino	1	(0)	1	(0)	2
	Black or African American	12	(57)	9	(26)	21
	Missing			1	(0)	1
Household income	Less than $24,000	4	(19)	17	(49)	21
	$24,000-$47,000	8	(38)	11	(31)	19
	$48-$71,999	4	(19)	2	(6)	6
	$72,000 or more	4	(19)	3	(9)	7
	Unsure	1	(5)	2	(6)	3
	Missing			1	(0)	1
Adequate financial resources in the last 30 days	Yes	17	(70)	21	(60)	38
Self-reported Health	Very good	5	(24)	10	(29)	15
	Good	6	(29)	14	(40)	20
	Moderate	9	43)	10	(29)	19
	Bad	1	(5)	1	(3)	2
	Missing			1	(0)	1
Cancer	Breast	17	(81)	30	(83)	47
	Other	4	(19)	6	(17)	10
Diagnosed	> 10 years ago	4	(19)	13	(36)	17

	6- 10 years ago	7	(33)	10	(28)	17
	≤ 5 years ago	10	(48)	13	(36)	23
Cancer treatment**	Surgery	19	(90)	28	(78)	45
	Chemotherapy	17	(81)	27	(75)	44
	Radiation	16	(76)	17	(47)	33
Support programs for women cancer survivors	Programs to support women would be beneficial	21	(100)	34	(97)	55

**Participants can be of any race; therefore, percentages do not add up to 100%*

***Participants may have had more than treatment; therefore, percentages do not add up to 100%*

Work patterns, environment and factors affecting work outcomes

Of the 57 participants who were employed before diagnosis, twenty-one participants (37%) were employed in management or professional occupations. Of these 21 participants, two (10%) reported losing their job at diagnosis; 12 (57%) continued to work during treatment, including 10 (83% of the 12) at the same job; and seven (33%) stopped working during treatment. One person who stopped working while receiving treatment was older than 55 years at the time. Two of the seven participants (29%) who had to stop working during treatment were able to return to work following treatment completion with their previous employer. Five of the seven (71%) who had stopped working during treatment did not work post-treatment completion. See Table 2. Of the 36 women employed in service, office support or production occupations, twenty-three (64%) reported keeping their job at diagnosis, while 13 (36%) lost their job as a result. During treatment 12 out of 23 (52%) kept working, all 12 at the same job as before diagnosis, while 11 out of 23 (48%) stopped working during treatment. Ten of these 11 (91%) returned to work after treatment was completed, 8 at the same job as before and two in a different job.

Job loss rates are higher for women who worked in service, office support, or production occupations than for women who worked in management and professional occupations (36% and 10% respectively). However, return rates were higher among women who had held service, office support, and production occupations compared to women who had held management or professional occupations (91% and 29% respectively). In the long run, employment rates were higher for women in management and professional occupations, compared to the remaining participants (52% and 39% respectively). Both groups of respondents reported similar rates of disability or difficulties in performing work tasks.

Table 2. Comparison of work outcomes by occupation type.

	Management/ Professional	Service, Office Support, Production
Working at time of diagnosis	n=21 (%)	n=36 (%)
Eligible to take medical leave at diagnosis	17 (81)	24 (67)
Health insurance through employer at time of diagnosis	18 (86)	23 (64)
Loss job after diagnosis	2 (10)	13 (36)
Working at treatment start	n=19 (%)	n=23 (%)

Continued to work during treatment	12 (63)	12 (52)
Stopped working during treatment	n=7 (%)	n=11 (%)
Returned to work post treatment	2 (29)	10 (91)

Work related concerns

Analysis of the qualitative open-ended questions of the questionnaire shows that most frequently reported work-related concerns experienced after receiving the news of diagnosis were related to productivity losses at work due to treatment side effects or pain attributable to the disease (20/57), followed by disease management issues (12/57), fear of job loss (9/57) and economic concerns (8/57) (see Table 3). Twelve participants explicitly reported not being concerned about their employment.

Table 3. Illustrative example of concerns reported by survivors employed prior to diagnosis.

Emergent themes	Theme/concern	Illustrative quotes
Work productivity loss	Fatigue and other treatment side effects	*"I would not be able to continue to work in the same capacity due to fatigue and effects of treatment" (participant E52)* *"I was worrying about having the strength to work" (participant S19)*
	Pain	*"holding babies, not sure if I could hold" (participant E27)*
Fear of job loss	Resulting from absence from work	*"not be able to continue to work during treatment. Is my attendance record going to affect my future at my place of employment" (participant S38)*
	Resulting from poor productivity	*"not able to do my job for pain and tiredness" (participant E31)* *"will they fire me for so many missing days" (participant S77)*
Concern on how to manage disease and work duties	Concern regarding benefits (sick days etc.)	*"would I have enough sick leave in case the treatment was extensive" (participant S18)*
	Due to lack of flexibility of the employer	*"My manager gave me a hard time about time off for treatment" (participant E5)* *"stress of the job – boss that was a bully" (participant E4)*
General economic concern	Ability to pay medical bills, sustain the family economically	*"How was I going to cover medical bills and additional cost related to cancer treatment" (participant S73)*
No work-related concerns	Focus on health	*"I was not so worried about the job because I was more worried about the diagnosis which was devastating at the time" (participant S15)* *"my only worry was completing the recovery process" (participant S11)*

QCA results

The QCA pathway that appeared to best explain the outcome of working after treatment completion included the following components: working during treatment, having employer-based health insurance and being eligible for medical leave (perception of). Type of occupation (management or professional versus service, office support, or production) does not appear to influence the outcome of work after treatment completion. Considering the intermediate pathway resulting from the QCA, the solution terms involving presence of working during treatment, health insurance and medical leave eligibility explain 49% of participant work status following treatment completion. Consistency for all the pathways were above 0.85, the typically accepted threshold (Thygeson et al., 2012).

Table 4. QCA results: configuration leading to work after treatment outcome.

	Consistency	Raw coverage	Unique coverage
Being eligible for medical leave at diagnosis AND being insured through work at diagnosis AND working during treatment	0.947368	0.486486	0.486486

Discussion

The purpose of this exploratory study is to explore the factors that influence employment status among minority women cancer survivors following diagnosis and treatment. Our findings delineate how work environment, type of occupation and job-related concerns contribute to shape the work experience of women cancer survivors. Work-related concerns appear to be similar across different occupation types. Initial examination of the data suggests that cancer survivors in service, office support, and production occupations are more likely than survivors working management and professional occupations to lose their jobs following diagnosis. Furthermore, the QCA analysis suggests that working after treatment completion was not explained by type of occupation *per se*, but rather by a combination of working during treatment, having health insurance and being eligible for medical leave. These findings, in conjunction with other research, suggest that work-based resources are associated with post-treatment employment. Blinder and colleagues (Blinder, Eberle, Patil, Gany, & Bradley, 2017) for example, report that when adjusted for ethnicity, breast cancer survivors who held non-management or professional jobs have decreased odds of having a job, either at which they are currently working or from which they are on leave, four months following treatment completion, than management and professional workers. They also note that survivors who have employer-sponsored health insurance, or whose workplaces have at least 50 employees have increased odds of having a job four months after treatment completion (Blinder, Eberle, Patil, Gany, & Bradley, 2017). This suggests that type of occupation may be associated both with access to job retention and access to health insurance.

Among private sector employees, large establishment size is associated with the increased likelihood that employees will be offered health insurance and medical leave. Due to historical circumstances, health insurance is a benefit provided by many employers in the U.S. (Blumenthal, 2006). Employees who work in the public sector have access to employer-provided health insurance. For example, among full-time state, and local public sector employees, 99% have access to health insurance (Bureau of Labor Statistics, 2016). Within the private sector, access to employer-based coverage varies by size of establishment. In 2012, for example, 57% and 94% of establishments in the private sector with fewer than 50 workers and at least 500 workers, respectively, offered health benefits to at least some employees (Wiatrowski, 2013). The Employer Shared Responsibility Provision of the Affordable Care Act (ACA), implemented in 2015, penalizes employers with more than 50 full-time employees who decline to offer coverage that meets minimum value and affordability standards (Kaiser Family Foundation, 2015). The ACA does not, however, require employers to provide health insurance. Many of our participants underwent cancer diagnosis and treatment prior to implementation of the ACA.

Access to employer-provided health care is spread unevenly across occupations. Substantially more private sector management and professional workers have access to employer-based health insurance than those in other major occupational categories. Sixty percent of private sector workers in management and professional occupations have access to employer-based healthcare. In comparison, only 22% of private sectors workers in service occupations, and 38% workers in sales and office and administrative support occupations, have access to employer-based healthcare (Bureau of Labor Statistics, 2016). Cancer patients who obtain their health insurance through their employer may be particularly motivated to retain their jobs to maintain relatively affordable health insurance (Nekhlyudov et al., 2016). As Bradley and colleagues noted, women who depend on employer-based insurance are less likely to reduce their labor after a cancer diagnosis (Bradley, Neumark, & Barkowski, 2013). Being eligible for medical leave is also associated with employer size. The Family and Medical Leave Act (FMLA) (29 U.S.C. 2601 et seq.) applies to private establishments with more than 50 employees within a 75-mile radius as well as public agencies. Covered employers are required to provide up to 12 weeks of unpaid leave a year to eligible employees for qualified medical reasons and to maintain health insurance coverage. Eligible employees are those whose job tenure is at least 12 months or who worked at least 1,250 hours during the previous year (Hewitt, Greenfield, & Stovall, 2005; US Department of Labor). Survivors whose employers provide 12 weeks of medical leave may experience substantial challenges given that cancer treatment and its side- and late-effects frequently extend beyond this period. Cancer survivors would also benefit from paid leave. Again, size of employer matters. Workers employed by small employers are less likely than those working for larger employers to have access to paid sick leave (Hill, 2013). Access to paid leave would increase the incentive for cancer patients to retain their jobs during treatment.

Work concerns were similar across participants in management and professional occupations, and participants in service, office support or production occupations, with reduced work productivity and management of the disease being the two main areas of concern. These concerns and issues are well documented among cancer survivors (Nekhlyudov et al., 2016; Sandberg, Strom, & Arcury, 2014). Our findings are consistent with Nekhlyudov's (Nekhlyudov et al., 2016) who suggests cancer survivors felt that cancer interfered with physical or mental tasks or productivity at work.

The QCA analysis shows that ability to keep working while receiving primary treatment is one important factor in explaining whether cancer survivors were working after treatment completion. Studies have indicated that being able to maintain employment while receiving treatment is affected by workplace environment, such as the ability of employers to accommodate survivors' needs: such accommodations have been shown to substantially increase job retention (Bouknight, Bradley, & Luo, 2006; Moskowitz, Todd, Chen, & Feuerstein, 2014; Torp, Nielsen, Gudbergsson, & Dahl, 2012). It is therefore not surprising that ninety-six percent (n=55) of participants who were working at the time of diagnosis highlighted the need for programs to assist working women diagnosed with cancer. Encouraging programs that support survivors to continue to work during treatment could be important to improve work outcomes for women in this population.

While studies have shown that recruitment of minorities can be challenging (Ejiogu et al., 2011; Ford et al., 2008; Tosti, 2015), we were able to successfully recruit minority cancer survivors in a relatively short time. Selecting research questions that directly affect the community under study can be key to recruiting and retaining minority participants (Ejiogu et al., 2011; Fouad et al., 2000), To this end, collaboration with community partners who are informed of issues that are relevant to a specific minority population, as done in this study, can be an effective strategy for successful inclusion of these groups. The study team's flexibility with respect to location and time during which the interviews were conducted (over the weekend at survivorship events) was also conducive to recruitment of participants who work hourly jobs and with little freedom to change their work schedule to be interviewed.

The specific focus on minority women adds to a literature in which European American women are typically disproportionally represented (Bouknight, Bradley, & Luo, 2006; Bradley, Neumark, Luo, & Schenk, 2007; Bradley & Wilk, 2014; Mujahid et al., 2011; Mujahid et al., 2010). Inclusion of minority segments of the population was made possible due to a recruitment strategy that involved community-based organizations, which proved to be successful. While we recognize the challenges of purposive sampling (Hennink, 2011), this strategy is commonly used in exploratory studies such as the present one (Bernard & Ryan, 2009). While it certainly deems caution with respect to the generalizability of study results, the heterogeneous nature of the sample in terms of occupational categories allowed us to explore a broad range of occupational experiences that could inform future studies.

Certain limitations should be taken into account when considering the study's results. While the majority of participants are minorities, the sample was too small to conduct more sophisticated statistical analysis. Severity and stage of disease progression are not captured in the data, even though disease burden is found to be relevant in explaining employment outcomes (Tevaarwerk et al., 2016), nor are physical and mental job demands included in the analysis. Our analysis has some limitations as an fs/QCA. The pathways resulting from QCA analysis only partially explain work outcomes. Further research with a larger sample is needed to uncover additional factors not captured in this preliminary study. While Crisp set calibration was appropriate for the focus of this analysis, it required a certain degree of simplification with respect to participants' experiences: for instance, we record if the participant had health insurance (yes/no) but we do no measure to what extent health insurance covered their medical needs during cancer treatment. Moreover, the data collected did not allow us to stratify and compare participants based on the type (e.g. private/public, part-time/full-time) and size of the employer, which affects access to benefits and therefore can influence employment status during and after treatment. Our data did not distinguish between participants who stopped working during treatment while continuing to hold their job (e.g., being on a medical leave) from those who lost their job during treatment. Additionally, our data did not capture whether the participant willingly stopped working or was fired as a result of circumstances related to the cancer diagnosis.

This preliminary work fills a knowledge gap about survivorship experiences of women in underserved populations (Tisnado et al., 2017), by exploring employment pathways after cancer treatment in a predominantly minority sample that includes survivors who held different types of jobs. Work outcomes after cancer and associated risk factors are not fully understood (Tevaarwerk et al., 2016). Yet, the employment aspect of cancer survivorship is salient as work outcomes have substantial implications for cancer survivor's short and long-term economic, physical and psychosocial well-being (Hewitt, Greenfield, & Stovall, 2005; Nowrouzi, Lightfoot, Cote, & Watson, 2009). Future research could explore the role of federal, state, and employer policies and procedures and driving organizational characteristics, such as employer size and being a public or private sector employer, in cancer survivors' employment outcomes. These issues should be explored in light of the increase in the number of jobs that do not provide stable, full time employment, with good wages and benefits (Kalleberg, 2011), the impact of the Affordable Care Act on cancer survivors' coverage (Davidoff, 2015), potential consequences of the repeal of the law (Goldstein, 2017), and resources potentially available to cancer survivors under the Americans with Disability Act, which covers employers with fewer than 15 employees (US Equal Employment Opportunity Commission).

This study provides relevant insights on the work experience and concerns of minority women cancer survivors, a population segment that has been frequently underrepresented in the literature on survivors' work outcomes after cancer diagnosis and treatment. Our findings highlight the need for the development of programs that assist minority cancer survivors during their work-related transitions and the importance of tailoring such interventions to different work environments. Future studies should integrate survivors' perspectives with employers' views on the impact of cancer on work (Grunfeld, Low, & Cooper, 2010), which would be crucial for the development of effective programs to assist working women cancer survivors. We also need to examine in detail how work experiences following a cancer diagnosis may vary by race and ethnicity as well as how culture (beliefs, norms and values) and discrimination may influence women's work-related decisions and work outcomes after cancer diagnosis and treatment.

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Conflict of interest

The authors declare that they have no conflict of interest

Authors' contributions

Each author contributed substantially to the final manuscript. All authors contributed to the design of the study. DMT, AWF, and PS collected the data.

DMT, SS and JCS worked on data analysis. DMT, SS and JCS wrote the draft paper. All authors contributed to outlining the main study implications.

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