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Work-family spillover and depression: Are there racial differences among employed women?

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ABSTRACT

The intersection of work and family life can be a source of burden (negative) and a source of growth (positive). Negative work-to-family and family-to-work spillover have been linked to poor mental health, while positive work-to-family and family-to-work spillover have been linked to improved health outcomes. Less is known about these relationships in racial subgroups. Louisiana, USA, has a large proportion of African Americans, providing a unique population in which to study these relationships. The objectives of this study were to examine, among a sample of women in southern Louisiana in 2017, levels of work-family spillover by race and how the relationship between work-family spillover and depressive symptoms varies by race. 284 employed women (61% White, 39% Black) met eligibility criteria and participated in a survey to collect information on work-family spillover (positive and negative) and depressive symptoms. White women experienced higher levels of both kinds of negative spillover (work-to-family and family-to-work) as well as higher levels of positive work-to-family spillover compared to Black women. There were no differences between White and Black women with respect to positive family-to-work spillover. Higher levels of negative work-to-family spillover were related to greater depressive symptoms among both Blacks and Whites. But higher levels of negative family-to-work spillover were related to higher levels of depressive symptoms among Black women only. A protective relationship from positive family-to-work spillover for depressive symptoms was observed among White women only. This study fills an important gap in the literature on racial differences in the relationship between work-family spillover and depression.

Introduction

Demographic and economic changes in the US since the 1970s have brought about an increase in the number of women, specifically Black women, participating in the labor force. Overall, women accounted for about 47% of the total labor force in 2018, representing an increase from 39% in 1972. By contrast, Black women accounted for 53% of the Black labor force in 2018, representing an increase from 45% in that same time period (Bureau of Labor Statistics and U.S. Department of Labor, 2019). At the same time, the work environment may exert different influences on Black and White women. Blacks are more likely to experience issues such as stereotyping, restricted advancement opportunities, biases, and other workplace stressors (Greenhaus & Parasuraman, 1993). In addition, 37% of Blacks rated their workplace as fair or poor on providing a healthy work environment, compared to 26% of Hispanic and 21% of Whites in a 2016 nationally representative probability sample of US workers (National Public Radio et al., 2016). Home life can also impact work life in different ways. In the same survey, Black workers (41%) were more likely to report caring for a seriously ill, injured, or disabled family member while working, compared to Whites (28%) and Hispanics (20%) (National Public Radio et al., 2016). Stressors related to the work-family interface can impact health, particularly depression. Given the different work contexts experienced by Blacks and Whites, and the resultant stress engendered by the simultaneous responsibilities of being in the labor force while caring for a family, understanding racial differences in how work and family life intersect is an important focus of population mental health.

Negative work-family linkages. One aspect of the work-family

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interface is work-family conflict, which occurs when role pressures from the work and family domains are mutually incompatible in some respect (Greenhaus & Beutell, 1985). When confronted with these role pressures, an individual will ultimately resolve the conflict, either by attending to the work role pressure or the family role pressure, which results in work-family interference (Grzywacz & Smith, 2016). This work-family interference is bidirectional in nature, in that it can operate from work to family as well as from family to work (Allen, 2013; Allen & Martin, 2017). For example, an employee who stays at work late may miss eating dinner with her children, or an employee who is under significant pressure at work may take it out on her spouse at home. Both of these are examples of work-to-family interference. Family-to-work interference, on the other hand, occurs in the opposite direction, and describes the extent to which a worker's family life influences her work life (Crouter, 1984). It happens, for example, when an employee with a sick child has to miss work.

Positive work-family linkages. While much of the early research in this area focused on the negative consequences of the work-family interface, more recent work highlights the *benefits* of occupying roles in both the work and family environments (Grzywacz & Marks, 2000; Marks & MacDermid, 1996). The benefits are conceptualized with multiple terms, such as positive spillover, facilitation, enhancement, or enrichment (McNall et al., 2010). Elucidating these distinctions is beyond the scope of this paper; here we will focus just on positive spillover between work and family roles. Positive spillover refers to the ways in which the occupation of one role results in a transfer of benefits to the other role; it, too, is bidirectional in nature (McNall et al., 2010). For example, positive work-to-family spillover may occur when an employee who participates in team meetings at work believes that joint decision-making will be better for her family; or an employee who learns communication and listening skills at work may generalize these skills to family members at home. Positive family-to-work spillover, on the other hand, may occur when one has a supportive partner at home with whom to talk through difficulties at work, which enables her to better handle her job pressures. Positive spillover is independent of (not just the opposite of) work-family interference, hereinafter referred to as negative spillover, in that it is possible to simultaneously experience high levels of both positive and negative spillover between work and family roles, a high level of one and a low level of the other, or low levels of both (Grzywacz & Marks, 2000). Thus, there are four distinct concepts in the work-family experience: negative work-to-family spillover, negative family-to-work spillover, positive work-to-family spillover, and positive family-to-work spillover.

Work-family environment and mental health. Negative spillover emanates from the scarcity hypothesis, which suggests that the expenditure of energy in one domain depletes the available energy for the other domain (Goode, 1960). This inability to meet competing demands results in strain and psychological distress (Goode, 1960; Hammer et al., 2005). Positive spillover, on the other hand, is rooted in expansion theory, which emphasizes that the advantages of pursuing multiple roles are likely to outweigh the disadvantages (Marks, 1977). These advantages can result in greater access to resources and an increase in psychological well-being (Allen & Martin, 2017; Greenhaus & Powell, 2006). Both forms of spillover have been shown to have mental health consequences (Allen, 2013; Allen et al., 2000). For example, reviews of the literature find that negative spillover in both directions is related to higher levels of depression, anxiety, emotional strain, and to lower levels of overall life satisfaction (Hammer et al., 2005; Hammer & Zimmerman, 2011).

While less research has been conducted on positive compared to negative spillover, positive spillover has been linked to improved mental health (Hammer & Zimmerman, 2011). In fact, positive spillover, or enrichment, tends to have similar effects on mental health compared to negative spillover, but in the opposite direction (Allen, 2013). In a meta-analysis of over 20 studies, a positive relationship between positive spillover (both directions) and a combined measure of physical and mental health was found (McNall et al., 2010). In fact, positive spillover was found to have a stronger impact on depression than negative spillover in a national sample of dual-earner couples with children, (Hammer et al., 2005).

Work-family environment and race. Diversity in the work-family literature has long been noted as a research need, with the majority of studies published to date focusing on white-collar, professional, and highly educated employees of large organizations (Allen & Martin, 2017). However, the intersection between work and family life may also be very different for White and Black women. Little is known about the ways in which different ethnic groups are affected by the strains associated with the conflicting demands of work and family (Roehling et al., 2005) The contexts in which different racial groups work could lead to differences in levels of spillover, whether work-to-family or family-to-work, or positive or negative. However, despite calls for more research (Allen et al., 2000), relatively few studies have explicitly examined racial differences in spillover. Those that have been conducted have found few differences in negative spillover between Whites and non-Whites (Frone et al., 1992; Nomaguchi, 2009; Rice et al., 1992), although one study found that Blacks had lower levels of negative spillover in both directions and higher levels of positive family-to-work spillover (Grzywacz et al., 2002). Most of these analyses, however, tended to be hampered by low numbers of non-White participants (Grzywacz et al., 2002; Nomaguchi, 2009; Rice et al., 1992).

Depression and race. In general, the mental health literature shows that while non-White groups have either lower or equivalent rates of mental disorders compared to Whites, their psychological symptoms tend to be more severe and of longer duration (American Psychiatric Association et al., 2017). Possible explanations for these disparities within minority communities include less access to treatment, poorer quality of care, lower rates of health insurance, and higher levels of stigma, racism or discrimination, as well as a lack of cultural understanding by health care providers (American Psychiatric Association et al., 2017; Bailey et al., 2019). Racial and ethnic minorities thus tend to bear a greater burden from unmet mental health needs and experience a greater loss to their overall health and productivity (U.S. Department of Health and Human Services, 2001). Racial differences that impact mental health and/or the work-family environment may result in disparities in the relationship between work-family spillover and depression.

In southern Louisiana, about 38% of residents are Black (United States Census Bureau and American Community Survey, 2019), thus providing a unique population in which to study these relationships among racial subgroups. Women, the focus of this study, represent an influential yet vulnerable and understudied population. They are often central to decision-making processes within households, particularly with respect to health, support, diet, and caregiving. This study attempts to fill the gap in research on racial disparities in health by examining, among a sample of women residing in southern Louisiana, 1) levels of work-family spillover by race, and 2) how the relationship between work-family spillover and depressive symptoms varies by race.

Methods

Participants

The data for this study are from a sample of participants from the Women and Their Children's Health (WaTCH) study, originally designed to investigate the physical and mental health effects of the Deepwater Horizon Oil Spill in Louisiana. WaTCH participants were initially recruited using a sampling frame of valid addresses with phone numbers in the 7-parish region of Southern Louisiana. Proportional representation relative to the 2010 census was sought across all census tracts in the region. The distribution of characteristics such as race and employment in the original WaTCH cohort matched characteristics of the overall region as well as the of state (Peters et al., 2017; U.S. Census Bureau,

2017). Women in the original cohort (n = 2852) were followed over two waves of data collection (2012–2016) and were 18–80 years old at baseline (Peters et al., 2017) During summer 2017, 1376 adult WaTCH participants who provided valid email addresses were invited to participate in a pilot study about stress among women. 526 women consented and completed a survey on work-family spillover, health conditions, and health behaviors. Among these, 350 women met eligibility criteria of being currently employed, either full-time or part-time. 41 participants were subsequently removed for missing values on depressive symptoms, income, or race variables, as were 25 respondents who were neither White nor Black, resulting in a final sample size of N = 284. This sample was fairly representative of the overall community from which they were drawn (U.S. Census Bureau, 2017). The study was approved by the Louisiana State University Health Sciences Center-New Orleans Institutional Review Board.

Procedure

Study participants were recruited through email invitation, consented online, and administered an online survey via REDCap (Research Electronic Data Capture) (Harris et al., 2009) hosted at the Epidemiology Data Center at the LSUHSC SPH. Periodic automated reminders were sent every 4 days until the consent form and survey were completed, or up to 3 times. Participants were given $10 upon completion of the survey.

Measures

Outcome

Depressive symptoms were measured at the time of the survey with the Center for Epidemiologic Studies Depression Scale-10 (CESD-10) (Andresen et al., 1994). Respondents self-rated the frequency that symptoms occurred during the past week on a 4-point scale ranging from none of the time (0) to most of the time (3). Item scores were summed after reverse coding positive mood items (range 0–30). Total scores were dichotomized as <10 or ≥ 10, where ≥ 10 was indicative of depressive symptoms (Andresen et al., 1994).

Exposures

Work-family spillover was assessed using self-report scales developed by researchers from the National Survey of Midlife Development in the United States (MIDUS) (Grzywacz & Marks, 2000). Four distinct dimensions of work-family spillover are represented. Negative work-to-family spillover comprised 4 items (e.g., "Your job reduces the effort you can give to activities at home; "); positive work-to-family spillover comprised 3 items (e.g., "The things you do at work help you deal with personal and practical issues at home; "); negative family-to-work spillover comprised 4 items (e.g., "Responsibilities at home reduce the effort you can devote to your job; "); and positive family-to-work spillover comprised 3 items (e.g., "Talking with someone at home helps you deal with problems at work"). Responses for each item ranged from 1 (never) to 5 (all the time) in the past year such that higher responses reflected greater levels of spillover. Grouping of items by dimension was confirmed via Principal Components Analysis and corresponded with groupings used by the developers of the original instrument (Grzywacz & Marks, 2000). Final scores represent means of the items in each domain, with missing values ignored.

Effect modifier

Race was self-reported as either White or Black during the first wave of WaTCH data collection and linked to participants' current survey responses. Respondents who self-reported as neither White nor Black were excluded from this analysis.

Other covariates

Age at time of survey, household income over the past year, current marital status, full- or part-time employment status, and number of minor children living in the household were self-reported. Education level was self-reported during the first wave of WaTCH data collection and linked to participants' current survey responses.

Analysis

Descriptive statistics were calculated for all measures first for the overall sample and then stratified by race. Comparisons by race were performed using t-tests for continuous variables or chi square tests for categorical variables. A crude modified Poisson regression model with robust variance (Zou, 2004) was used to calculate Relative Risks (RR) and to test whether the four exposure variables interacted with race. We then added in covariates based on a review of the literature and the creation of a directed acyclic graph (DAG) (Greenland et al., 1999) using Dagitty (Textor et al., 2016). The minimal sufficient adjustment set included the covariates age, household income, education, and marital status. This final model was then stratified by race. We assessed all associations between the four work-family spillover variables and depressive symptoms by calculating relative risks (RRs) with their 95% confidence intervals (CIs) using separate modified Poisson regression models with robust variances. All statistical tests were carried out using SAS 9.4 (SAS Institute, Inc.) at Type 1 error level 0.05.

Results

Table 1 shows the demographic characteristics of the sample stratified by race. Of the 284 women participants, almost half were college graduates and 84% were working full time. Average age was 46 years (SD 9.5), and the average number of children living in the household was 1.06 (SD 1.1). Demographic differences between the two racial groups were found only for household income and marital status, with Whites reporting higher income (69% of Whites had an income over $50,000/year vs. 34% of Blacks, $p < .0001$) and being more likely to be married or live with a partner than Blacks (79% vs. 39%, $p < .0001$). 43% of participants scored above the cut-off for depressive symptoms; this did not vary by race.

Table 2 shows the means and standard deviations for each of the work-family spillover scales by race. Whites experienced higher levels of negative work-to-family spillover (3.0, SD 0.9) compared to Blacks (2.7, SD 1.0). Blacks had lower levels of positive work-to-family spillover (2.3, SD 0.7) compared to Whites (2.6, SD 0.8). Blacks also had lower negative family-to-work spillover (2.0, SD 0.7) compared to Whites (2.4, SD 0.7). No differences between the racial groups was observed for positive family-to-work spillover.

We tested for interaction effects between race and each of the four spillover variables using a crude model predicting depressive symptoms. There was a positive interaction between negative family-to-work spillover and race (RR 1.63, 95% CI 1.12–2.36, $p = .0107$) and a weak positive interaction between positive family-to-work spillover and race (RR 1.29, 95% CI 0.98–1.68, $p = .0647$) (data not shown). Table 3 shows the results of the same model, adjusted for covariates, predicting depressive symptoms. We again observed a positive interaction between negative family-to-work spillover and depressive symptoms with race (RR 1.56, 95% CI 1.07–2.27) and a weak positive interaction effect between positive family-to-work spillover and race (RR 1.30, 95% CI 0.99–1.71).

We thus present the models stratified by race in Table 4. Negative work-to-family spillover is related to more depressive symptoms among both Whites and Blacks (Whites: RR 1.58, 95% CI 1.30–1.91; Blacks: RR 1.29, 95% CI 1.03–1.61), while positive work-to-family spillover is unrelated to depressive symptoms in either Whites or Blacks. We begin to see racial differences, however, with family-to-work spillover. Negative family-to-work spillover is unrelated to depressive symptoms among Whites (RR 1.19, 95% CI 0.93–1.54), but there is a relationship among Blacks (RR 1.71, 95% CI 1.25–2.35). Conversely, there is a protective

Table 1
Demographic characteristics and depressive symptoms of sample by race, Louisiana, 2017.

	Total (N = 284)		White (N = 174)		Black (N = 110)		
	n	%	n	%	n	%	p-value
Education							0.1663
High school graduate or less	148	52.11	85	48.85	63	57.27	
College or more	136	47.89	89	51.15	47	42.73	
Household Income for past year							<.0001
≤ $50,000/ year	127	44.72	54	31.03	73	66.36	
> $50,000/yr	157	55.28	120	68.97	37	33.64	
Marital status							<.0001
Married or living w/ partner	180	63.38	137	78.74	43	39.09	
Widowed, divorced, separated, never married	104	36.62	37	21.26	67	60.91	
Work status							0.6004
Currently working in at least one FULL time job	239	84.15	148	85.06	91	82.73	
Currently working in at least one PART time job	45	15.85	26	14.94	19	17.27	
Depressive symptoms							0.9737
No depressive symptoms (CESD-10 < 10)	163	57.39	100	57.47	63	57.27	
Presence of depressive symptoms (CESD-10 ≥ 10)	121	42.61	74	42.53	47	42.73	
Age, years (mean, SD)	45.62	9.50	46.12	9.14	44.84	10.05	0.2677
No. of children <18 yrs in household	1.06	1.12	1.15	1.18	0.93	1.02	0.1045
Perceived stress	5.89	3.21	6.14	3.21	5.51	3.19	0.1076

Missing data: perceived stress (n = 2)

Table 2
Work-family spillover by Race, Louisiana, 2017.

	Total (N = 284)		White (N = 174)		Black (N = 110)		
	mean	SD	mean	SD	mean	SD	p-value[a]
Negative work-to-family spillover	2.85	0.94	2.97	0.90	2.65	0.97	0.0046
Positive work-to-family spillover	2.50	0.79	2.63	0.80	2.30	0.74	0.0006
Negative family-to-work spillover	2.27	0.71	2.42	0.68	2.04	0.69	<.0001
Positive family-to-work spillover	3.27	0.93	3.34	0.80	3.17	1.10	0.1606

[a] P-values indicate differences between Whites and Blacks.

Table 3
Adjusted model predicting depressive symptoms, Louisiana, 2017, N = 284.

	RR	95% CI		p-value
Negative work-to-family spillover	1.56	1.29	1.88	<.0001
Positive work-to-family spillover	0.88	0.71	1.11	0.2814
Negative family-to-work spillover	1.16	0.91	1.48	0.2334
Positive family-to-work spillover	0.72	0.59	0.88	0.0015
Race (Black vs. White)	0.35	0.08	1.57	0.1711
Negative work-to-family spillover x Race	0.87	0.65	1.17	0.3530
Positive work-to-family spillover x Race	0.85	0.57	1.28	0.4360
Negative family-to-work spillover x Race	1.56	1.07	2.27	0.0222
Positive family-to-work spillover x Race	1.30	0.99	1.71	0.0558
Marital status (not married vs. married)	1.01	0.74	1.37	0.9562
Education (high school or less vs. college or more)	0.99	0.75	1.29	0.9167
HH Income (>$50 K/yr vs ≤$50 K/yr)	0.73	0.53	1.00	0.0527
Age (≥ 46.9 yrs vs < 46.9 yrs)	0.89	0.68	1.18	0.4234

Table 4
Adjusted models predicting depressive symptoms, stratified by race, Louisiana, 2017.

	RR	95% CI		p-value
Whites (n = 174)				
Negative work-to-family spillover	1.58	1.30	1.91	<.0001
Positive work-to-family spillover	0.88	0.70	1.11	0.2917
Negative family-to-work spillover	1.19	0.93	1.54	0.1678
Positive family-to-work spillover	0.74	0.60	0.90	0.0029
Marital status (not married vs. married)	0.96	0.65	1.39	0.8138
Education (high school or less vs. college or more)	1.00	0.71	1.42	0.9810
HH Income (>$50 K/yr vs ≤$50 K/yr)	0.70	0.49	1.00	0.0474
Age (≥ 46.9 yrs vs < 46.9 yrs)	1.12	0.80	1.56	0.5109
Blacks (n = 110)				
Negative work-to-family spillover	1.29	1.03	1.61	0.0243
Positive work-to-family spillover	0.76	0.56	1.02	0.0698
Negative family-to-work spillover	1.71	1.25	2.35	0.0009
Positive family-to-work spillover	0.92	0.77	1.09	0.3218
Marital status (not married vs. married)	1.09	0.62	1.92	0.7545
Education (high school or less vs. college or more)	0.95	0.62	1.44	0.7957
HH Income (>$50 K/yr vs ≤$50 K/yr)	0.94	0.50	1.77	0.8533
Age (≥ 46.9 yrs vs < 46.9 yrs)	0.55	0.32	0.94	0.0280

relationship between positive family-to-work spillover and depressive symptoms among Whites (RR 0.74, 95% CI 0.60–0.90), but no relationship among Blacks (RR 0.92, 95% CI 0.77–1.09).

Discussion

The objectives of this study were to compare work-family spillover across racial groups and to examine how the relationship between work-family spillover and depressive symptoms varied by race in a sample of women residing in southern Louisiana. For the first objective, we found in this sample that **White women experienced higher levels of both kinds of negative spillover (work-to-family and family-to-work) as well as higher levels of positive work-to-family spillover compared to Black women**. There were no differences between White and Black women with respect to positive family-to-work spillover.

For the second objective, we were interested in how the impact of spillover levels on depressive symptoms varied by race. We found that higher levels of negative work-to-family spillover were related to more

depressive symptoms among both Blacks and Whites. But **higher levels of negative family-to-work spillover were related to higher levels of depressive symptoms among Black women only. A protective relationship from positive family-to-work spillover for depressive symptoms was found among White women only. The protective relationship between positive work-to-family spillover and depressive symptoms was slightly stronger for Black women, while there was no protective relationship in White women.**

Race and work-to-family spillover

Negative work-to-family spillover may be experienced differently by different racial subgroups, yet examination of these differences has received less attention in the field. The present study of women, of whom 39% were African American, found **higher levels of negative work-to-family spillover among Whites compared to Blacks**. These results are consistent with the relatively small number of studies that have reported results with respect to race. National samples of married employees have found that Whites have higher levels of negative work-to-family spillover than Blacks, with the proportion of Black participants in these samples ranging from 9 to 10% (Grzywacz et al., 2002; Roehling et al., 2005).

The main antecedents of negative work-to-family spillover are job stressors (Frone et al., 1992, 1997b; Grzywacz & Marks, 2000), which include characteristics such as pressure at work, work dissatisfaction, work overload, more hours spent at work, lack of supervisor and co-worker support, and lack of autonomy. The stress process theory suggests that racial/ethnic minorities experience higher levels of exposure to stressors (Pearlin, 1999), including those experienced at work (Greenhaus & Parasuraman, 1993), which would lead us to expect that Blacks will experience higher levels of negative work-to-family spillover than Whites. Yet we found the opposite in this study. An alternative theory proposes that workers in high-status occupations (i.e., executives, professionals, and managers), due to their greater job demands, experience higher levels of negative work-to-family spillover than do their peers in lower status occupations (Schieman et al., 2009). A 2005 survey of U.S. workers showed that higher levels of negative work-to-family spillover among Whites relative to Blacks were related to professional occupations traditionally associated with more demands and longer hours (Schieman et al., 2009). It is possible that White women in the present study were more likely to be employed in such high-status occupations, thus explaining some of the Black/White differences in negative work-to-family spillover.

Positive work-to-family spillover. **Levels of positive work-to-family spillover were higher among White women than Black women in the present study**. Our findings are consistent with an analysis of a national sample of workers in the 1995 MIDUS study (Grzywacz & Marks, 2000) (N = 948 women, 13% of whom were Black) that found that Black women reported lower levels of positive work-to-family spillover than Whites. The theory of high-status occupations (Schieman et al., 2009) may again help to explain some of the differences in positive work-to-family spillover found in the present study. Though high status jobs may comprise more work-related demands, they may also result in more work-related resources, or aspects of the job that may stimulate personal growth and development (Bakker & Guerts, 2004). These may include things like schedule control, control over the pace of work, job authority, job autonomy, decision-making latitude, job skill, and personal earnings (Schieman et al., 2009). Such personal growth and development might result in positive work-to-family spillover. If White women in the present study were more likely than Black women to hold such high-status jobs, this might also explain some of the racial differences in positive work-to-family spillover.

Race and family-to-work spillover

Negative family-to-work spillover. The direction of spillover from family to work is less studied than the direction from work to family, but family stressors and resources have been identified as important antecedents of spillover in the family to work direction (Frone et al, 1992, 1997b). Family stressors include marital status, having a child, child misbehavior, family distress, and marital and family support. In the present study, **higher levels of negative family-to-work spillover were found among White women compared to Black women**. This differs from Frone's study of Erie County, New York, married workers, which found no differences between Whites and non-Whites in negative family-to-work spillover (Frone et al., 1992). However, our results are consistent with those of the 1995 MIDUS study, which found that Black women reported less negative family-to-work spillover than Whites (Grzywacz & Marks, 2000).

Black-White differences in antecedent family stressors may explain the observed Black-White differences in negative family-to-work spillover found in the present study. Stronger social and family ties in the Black community may engender more assistance in the form of childcare and other support to employed Black women than to employed White women (Benin & Keith, 1995), which could explain why negative family-to-work spillover is less likely among Black women. Another possible explanation is the more egalitarian gender-role attitudes among Blacks compared to Whites; Black men tend to be less critical of maternal employment and to participate in a greater proportion of household chores than White men (Roehling et al., 2005). Finally, Black women have been in the workforce for much longer than White women, starting with slavery and continuing through to modern times when there have been limited economic opportunities for Black men, conditions which led to the paid employment of Black women. This cumulative experience may have provided them with sufficient time to work out some of the challenges attributable to negative family-to-work spillover (Roehling et al., 2005).

Positive family-to-work spillover. In the present study, **no differences between White and Black women with respect to positive family-to-work spillover were observed**. This is consistent with results reported in the MIDUS study, which also found no significant differences in positive family-to-work spillover between Whites and Blacks (Grzywacz & Marks, 2000), but contrasts with another analysis of MIDUS data in which Blacks experienced higher levels of positive family-to-work spillover compared to Whites (Grzywacz et al., 2002). No other studies examined positive family-to-work spillover by race. More research in the area of family-to-work spillover would help to clarify some of these mixed findings.

Race and the impact of spillover on depression

The second objective of the study was to examine how the relationship between work-family spillover and depressive symptoms varies by race. No racial differences were observed for an association between negative work-to-family spillover and depression. Positive work-to-family spillover was weakly protective for depression among Black women only. Negative family-to-work spillover was related to increased depressive symptoms for Black women only. Finally, positive family-to-work spillover was protective for depressive symptoms among White women only.

There is a wide literature about the effects of spillover on depression, but very little that explores those effects by race. For example, the impact of negative work-to-family spillover on increased depression has been reported in several studies (du Prel & Peter, 2015; Franche et al., 2006; Frone et al., 1996; Grzywacz & Bass, 2003; Hammer et al., 2005; Okechukwu et al., 2012; Peter et al., 2016; Stephens et al., 1997; Wang et al., 2012), only one of which examined effects by race. That study, in Erie County, New York, found no differences between Blacks and non-Blacks (Frone et al., 1992), consistent with the present study.

However, that study took place 25 years prior to the present one and in a very different region of the country. A meta-analytic review provides support for a positive relationship between work-to-family enrichment (encompassing positive spillover, enhancement, and facilitation, terms which are often used interchangeably) and a combined construct of better physical and mental health (McNall et al., 2010), but did not examine results by race. Similarly, the association between negative family-to-work spillover and depression is fairly well established overall (Frone et al., 1996, 1997a; Grzywacz & Bass, 2003; Hammer et al., 2005; Okechukwu et al., 2012; Stephens et al., 1997), but only a single older study examined associations by race (Frone et al., 1992). This single study found no racial differences in the negative family-to-work and depression relationship, contrary to findings in the present study. Again, comparability may be limited due to the discrepant time periods and geographic locations. Finally, protective relationships between positive family-to-work spillover and depression were identified in national cross-sectional studies of workers (Franche et al., 2006; Grzywacz & Bass, 2003; Hammer et al., 2005), but these samples also lacked diversity and did not explore associations by race. In short, the complexities of race in this literature have been largely ignored.

The existence of unmeasured common causes of both the exposure (spillover) and the outcome (depression) may provide some explanation for the racial differences found in the present study with respect to spillover and depression. In the case of spillover in the work-to-family direction, there may be unmeasured factors related to the job environment, and in the case of spillover in the family-to-work direction, there may be unmeasured factors related to the home environment. Some of these factors may also be related to depression, and thus could confound the spillover-depression relationship, particularly if they were associated with race as well. Such antecedent factors consist of work- or home-generated resources in five categories: skills and perspectives, psychological and physical resources, social capital resources, flexibility, and material resources (Greenhaus & Powell, 2006). If, for example, jobs that promote self-esteem or social support, characteristics which have been clearly associated with depression (Gariépy et al., 2016; Sowislo & Orth, 2013), also tend to be held by Black women compared to White women, it could explain why positive work-to-family spillover is protective, albeit only weakly, for depression among Black women only. If, on the other hand, there are specific unmeasured characteristics of the family environment that differ by race and that are also related to depression, it could explain why negative family-to-work spillover is associated with increased depression among Black women only, or why positive family-to-work spillover is protective for depression among White women only. For example, Black women may be exposed to more family distress at home, which increases their levels of depressive symptoms. Or White women may have access to more paid reliable household assistance, which is protective for depressive symptoms. Future studies should explore these job- and family-related antecedents to spillover with specific attention paid to racial differences.

A second source of unmeasured confounding is structural racism, which refers to the totality of ways in which society fosters racial discrimination through mutually reinforcing systems of housing, education, employment, earnings, health care, and more (Bailey et al., 2017). One example is racial residential segregation, which results in racially distinctive communities, leading to residential isolation of Blacks, a concentration of poverty in Black neighborhoods, and the exodus of low-skill, high-pay jobs in those same neighborhoods (Williams & Mohammed, 2013). Recent research has demonstrated that living in a socioeconomically disadvantaged area during childhood and adolescence has a long-lasting negative association with mental health, even after controlling for family-related risks (Elovainio et al., 2020). Elements of structural racism may provide another explanation for the racial differences noted in the spillover-depression relationship in the current study. Future research should methodically examine the larger social context in which workers exist in order to get at the root of these racial differences.

Limitations

The study is not without limitations: 1) Data were cross-sectional, so it is not possible to determine causality; that is, does work-family spillover cause depression or does depression cause work-family spillover? 2) A number of antecedents of work-family spillover, such as job and family factors, were not captured in this study, nor were elements of the larger social context. 3) Interaction effects between positive and negative spillover were not explored and should be considered in future research. 4) The mental health outcomes were self-reported, resulting in potential underreporting of depressive symptoms. 5) Because respondents for this study were required to have an email address, some selection bias may have been introduced. However, the potential for selection bias is minimized due to a) similar distributions on variables such as race, education, income, and employment between the sample and the original WaTCH cohort, and b) the fact that measurement of both the exposure (work-family spillover) and the outcome (depressive symptoms) occurred after recruitment into the study. 6) Data were collected in southern Louisiana and thus may not be generalizable to women in other parts of the United States.

Strengths

This study is one of the few that examines racial differences in the work-family spillover – depression relationship. While national studies can offer accurate estimates of work-family spillover for the U.S. as a whole, they are less effective for understanding trends occurring in smaller populations, such as racial subgroups that represent a smaller yet underrepresented proportion of the overall country. The present study's focus on a geographic region that has a large proportion of Blacks sheds light on Black-White differences in spillover. As such, it answers several calls for more studies incorporating racial context into work and family research (Perry-Jenkins & Wadsworth, 2017; Schieman et al., 2009). Another strength of this study is that it examined all four dimensions of spillover together, bi-directionally (work-to-family and family-to-work) and along two axes (positive and negative), filling gaps in the literature with respect to family-to-work spillover and positive spillover.

Conclusion

Changes in the patterns of women in the workforce, including Black women, women with children and single mothers, as well as changes in the patterns of men participating in household labor, call for a closer look at how the interface of work-family life impacts health, particularly mental health, as well as how such relationships differ by race. Future research should explore in more depth the differing work and family contexts experienced by women of different race in order to inform more tailored interventions and policies.

Ethics approval

The study was reviewed and approved by the Louisiana State University Health Sciences Center-New Orleans Institutional Review Board.

Credit Statement

Ariane Rung: Conceptualization, Methodology, Formal Analysis, Investigation, Data Curation, Writing – Original Draft, Visualization, Supervision, Project Administration, Funding Acquisition. **Evrim Oral**: Methodology, Validation, Formal Analysis, Writing – Review & Editing. **Edward Peters**: Methodology, Resources, Writing – Review & Editing, Supervision, Funding Acquisition.

Declaration of competing interest

The authors assert no conflicts of interest or financial disclosures.

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