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A bubble of protection: examining dispositional optimism as a psychological buffer of the deleterious association between negative work-family spillover and psychological health

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ABSTRACT

Demands and stressors from work increasingly encroach upon people's family lives in modern settings, resulting in poorer familial relationships and impaired psychological health. The current study proposed and examined dispositional optimism as a potential psychological buffer of the deleterious impact of negative work-to-family spillover (WFS) on psychological health. Based on a sample of employed midlife adults in the United States (N = 1,252) drawn from a large and nationally representative dataset, MIDUS 3, we found that dispositional optimism significantly moderated the relationship between negative WFS and subjective well-being, even after controlling for a variety of potential confounds. However, this moderation effect was not consistently observed for the relationship between negative WFS and depressive symptoms, suggesting that the buffering utility of dispositional optimism may be limited to day-to-day subjective well-being and may not extend to the domain of mental health issues. Nonetheless, our findings indicate the potential importance of considering psychological resources in our efforts to mitigate strains on psychological health arising from negative WFS – to which future studies are encouraged to explore further.

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Optimism; psychological resource; work-to-family spillover; psychological health

Work demands and stressors are oft-cited reasons for the poor quality of people's family lives. With longer working hours, burgeoning workloads, and technologies that keep people constantly connected to their bosses, co-workers, and clients, the boundaries between work and family have blurred considerably, leading to effects that spill over between these domains (Chesley, 2005; Glavin & Schieman, 2012). Spillover refers to the transfer of emotions, attitudes, or behaviours from one domain to another (Lambert, 1990). Despite the growing problem of negative work-to-family spillover (WFS) in modern contexts, little research exists that can offer insights into the psychological resources that people may call upon to cope. The current study addressed this gap by examining dispositional optimism as a hitherto underexplored psychological resource in the context of WFS. In so doing, we provide a novel test of dispositional optimism as a buffer against the detrimental effects of WFS, draw attention to the importance of psychological resources in enabling coping and building resilience, and signal possible avenues for self-help and interventions based on the mechanisms of optimism.

The impact of negative work-to-family spillover

Although spillover effects can sometimes be positive, such as when companies extend subsidies and other benefits to the family members of employees, a substantial amount of spillover is negative and poses serious problems. Negative spillovers occur partly due to the finite resources (e.g., time, energy) that people have to tackle demands from their varied roles in different life domains (Barnett & Gareis, 2006; Greenhaus & Beutell, 1985), which can lead to excessive strain in one domain and impede the fulfilment of roles in others. Negative WFS may precipitate emotional displays in affected individuals that are likely to be received poorly by others (e.g., work frustrations leading to a quick temper), prompting family members to distance themselves from the individual and marring one's family life (Peng, 2017). In turn, negative WFS has been shown to be associated with decreased job, family, and life satisfaction (Chesley, 2005; Cho & Tay, 2016; Demerouti et al., 2005; Sirgy et al., 2019; Stevanovic & Rupert, 2009) and even increased experiencing of depressive symptoms (Franche et al., 2006; Goodman & Crouter, 2009; Grzywacz & Bass, 2003; Okechukwu et al., 2012). These findings underscore the urgency of understanding and managing negative WFS.

The job demands-resources model suggests that a combination of workplace and intrapersonal resources is crucial for coping with the strains of work demands (Bakker & Demerouti, 2007, 2017). Both types of resources not only buffer against the negative impact of job stressors, but also promote employee engagement and commitment (Xanthopoulou et al., 2007). In turn, higher levels of engagement have been found to increase one's level of intrapersonal resources over time, creating a positive spiral that further enhances one's resilience and coping ability (Xanthopoulou et al., 2009). However,

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a preponderance of research on negative WFS has focused on workplace resources and interventions that primarily emphasize managing structural factors such as increasing work-time flexibility (Moen et al., 2011) or reducing job demands (Glavin & Schieman, 2012). Much lesser attention has been paid to individual-level psychological factors despite the propounded importance and utility of intrapersonal resources in managing stress from negative WFS.

Previous research has demonstrated the usefulness of intrapersonal psychological resources across various difficult circumstances. For example, dispositional gratitude has been found to moderate the association between socioeconomic status and interleukin-6 levels (an index of physical health; Hartanto et al., 2019). Another study showed that for elderly individuals facing various life stressors (e.g., housing problems), environmental mastery orientations were associated with higher levels of subjective well-being (Windle & Woods, 2004). Despite these insights, few (if any) studies have investigated if the deleterious associations of negative WFS may potentially be mitigated with psychological resources, which is rather surprising because these psychological resources are readily available in most well-adjusted individuals. This leaves us with an incomplete understanding of negative WFS management and precludes the formulation of dual-pronged interventions that holistically address both workplace and intrapersonal aspects specified in the job demands-resources model.

Optimism as an important psychological resource

To address the aforementioned gaps, we considered the role of dispositional optimism as a psychological resource that may reduce the impact of negative WFS on employees' psychological health. Dispositional optimism is the tendency to expect that future events will be favourable as well as an inclination towards attributing positive events to personal, permanent, and pervasive causes and negative events to external, temporary, and situation-specific causes (Segerstrom, 2007). We focused on dispositional optimism as it is a psychological resource that appears to have broad applicability, given that its instrumentality to resilience and coping has been well documented across an array of circumstances (e.g., Carver et al., 2010; He et al., 2013; Rothbaum et al., 1982). This renders it a promising and potentially viable psychological resource in the context of negative WFS that remains to be examined. Should it be established as a psychological resource for negative WFS, insights for both laypersons and practitioners could then be potentially derived from existing optimism-fostering interventions.

Dispositional optimism may promote resilience and coping in a number of ways. The aforementioned positive expectancies generated by optimism could allow work-family tradeoffs to be interpreted as circumstantial and temporary (e.g., brushing away stress from a client's unusually large order by appraising it as something that only occurs occasionally)—rather than pervasive and enduring (e.g., being trapped in a strenuous job with spontaneous large orders to fulfill)—and even potentially favourable (e.g., fulfiling such large orders is a learning experience that allows me to get better at what I do). By focusing on the malleability and favourability of the situation, optimistic individuals perceive greater efficacy and control (Karademas, 2006), thereby reducing anxiety and promoting adaptive coping strategies that enable them to actively deal with difficult circumstances (Yong et al., 2020). Indeed, optimists are more likely than pessimists to engage in primary control strategies such as task persistence (Carver & Scheier, 2014; Rothbaum et al., 1982), and a meta-analysis by Nes and Segerstrom (2006) showed that individuals who scored high on trait optimism tended to employ coping strategies that actively reduce present stressors (i.e., approach-oriented, problem-focused coping) as opposed to ignoring or withdrawing from stressors (i.e., avoid-oriented, emotion-focused coping). A recent study also found problem-focused rather than emotion-focused coping to be more effective at decreasing the impact of negative WFS on subjective well-being (Sirgy et al., 2019).

Furthermore, optimistic individuals have better coping flexibility and are more capable of adaptively switching between coping strategies than their less optimistic counterparts. Coping strategies (e.g., planning, persevering, detaching) may be differentially suited to managing the various forms of conflict between one's work and family roles (e.g., working overtime, stress from looming deadlines), and evidence suggests that optimistic individuals are more adept at selecting coping strategies that best serve their current situation (Nes & Segerstrom, 2006; Pavlova & Silbereisen, 2013; Reed, 2016). Highly optimistic individuals also show greater persistence and achievement even in the face of goal conflict (Segerstrom & Nes, 2006), indicating that they may be better at navigating the trade-offs between both work and family roles as well as goals.

Importantly, optimism can serve as a catalyst that galvanises effort directed towards resolving current difficulties. Much like how task effectiveness depends not only on competence but also self-efficacy (Bandura, 1982), which determines whether one decides to channel their capabilities towards accomplishing a task, optimism can play a role in determining whether behaviours such as persistence are worth enacting in the first place (Aspinwall & Richter, 1999; Aspinwall et al., 2001). This feature of optimism underscores its primacy in coping. Without a sense of optimism about present circumstances or the future, a person is unlikely to feel motivated to engage in resilient behaviours, thus rendering many other psychological and coping resources ineffective or unavailable.

In turn, dispositional optimism produces many positive outcomes for well-being. Dispositional optimism has been documented to predict lower levels of distress (Carver et al., 1993), greater perseverance and resilience during stressful periods (Carver et al., 2010; He et al., 2013), reduced burnout (Riolli & Savicki, 2003), better quality of life (Fitzgerald et al., 1993), improved subjective well-being (He et al., 2013; Jobin et al., 2014), and reduced depressive symptoms (Giltay et al., 2006; Vickers & Vogeltanz, 2000). Together, these findings indicate that optimism may help to buffer the impact of negative WFS on psychological health. By establishing dispositional optimism as a valuable psychological resource for negative WFS, mechanisms that underlie effective coping can then be proposed to advance our understanding of how this modern-day problem can be better managed.

The current research

The current study tested the role of dispositional optimism as a psychological resource in coping with negative WFS by examining whether it moderates the relationship between negative WFS and psychological health. We focused on subjective well-being and depressive symptoms as two key indicators of psychological health. Subjective well-being indexes individuals' positive evaluations of their lives (Diener, 1984), whereas depression characterizes a dysfunctional and negative state. Importantly, these constructs are conceptually related yet distinct – the absence of positivity does not necessitate the presence of negativity (Youssef-Morgan & Luthans, 2015) and it is possible for both to co-occur (e.g., Chappell & Reid, 2002; Watson & Tellegen, 1985). While previous studies have examined the influence of negative WFS on subjective well-being and depression independently (e.g., Okechukwu et al., 2012; Sirgy et al., 2019), we propound that examining both crucial psychological health outcomes within a single study provides for a more nuanced assessment of dispositional optimism's potential utility as a psychological buffer in the context of negative WFS.

Our analysis was conducted on a nationally representative, non-clinical dataset from the national survey of Midlife Development in the United States (MIDUS), which enabled our proposed relationships to be tested with a large sample while controlling for diverse potential confounds. Our inclusion of covariates was guided by previous calls for a more theoretically grounded approach when including control variables (Spector & Brannick, 2011). Thus, we controlled for other types of spillover (e.g., positive spillovers, family-to-work spillovers) as these variables are often correlated with negative WFS and are also demonstrated predictors of our criteria (e.g., Cho & Tay, 2016). Given previously observed gender effects on self-reported WFS (Michel et al., 2011), subjective well-being (Haring et al., 1984), and depression (Salk et al., 2017), we also controlled for respondents' sex. Additionally, because personality has been previously shown to impact negative WFS, subjective well-being, and depression (Emmons & Diener, 1985; Matsudaira & Kitamura, 2006; Wayne et al., 2004), we controlled for the Big-Five personality traits. Finally, we controlled for demographic factors including age, marital status, socioeconomic status, family information, number of years in a current job, number of chronic illnesses, and use of depression medication within the past 12 months, as such factors have been found to contribute to negative WFS by increasing strain in both work and family roles, are associated with psychological health (particularly depressive symptoms), and are often controlled for in past studies (e.g., Hartanto et al., 2020; Husain et al., 2000; Mantani et al., 2007; Michel et al., 2011).

Method

Participants

The dataset analysed in this paper, MIDUS 3 (ICPSR_36346-V7), consists of 3,294 midlife adults from the United States. MIDUS 3 is the third and most recent wave of data collection in the MIDUS project, which first started in 1995 with 7,108 midlife adults recruited through random digit sampling from 48 contiguous states (Radler, 2014; Ryff et al., 2017). For all three waves of studies that have been conducted so far (1995–1996 for Wave 1, 2004–2006 for Wave 2, and 2013–2015 for Wave 3), participants completed both a telephone interview and a self-report questionnaire that was returned by mail. We ensured that only participants who had fully completed MIDUS 3 and responded to the negative WFS measure in-particular were included in our analyses – this resulted in a final sample size of 1,252.

The MIDUS 3 dataset is publicly available at https://www.icpsr.umich.edu/icpsrweb/NACDA/studies/36346. MIDUS maintains a list of publications that have used its data (http://www.midus.wisc.edu/findings/index.php), and a look at the "Work and Family" section confirms that the specific combination of variables and relationships analysed in the current paper has not been examined in previous studies. The descriptive statistics for our sample are summarised in Table 1 and the correlations among these variables are reported in Table 2. Where available, published composite variables within the public dataset were used (for consistency in handling of missing data at the item level and, therefore, comparability with other publications arising from the dataset).

Measures

Subjective well-being. Based on the current conceptualization that subjective well-being comprises an individual's self-rated experience of high positive affect (PA), low negative affect (NA), and high general life satisfaction (Diener, 1984; Schimmack, 2008), we created a subjective well-being composite index by averaging participants' PA, NA (reverse scored), and general life satisfaction scores (e.g., McCullough et al., 2000; Oishi et al.,

Table 1. Descriptive statistics for the current sample.

	n	*M*	*SD*	Range
Demographic				
Age (years)	1,252	58.21	8.65	42–90
Sex (% male)	1,252	50.2%		
Marital status (% married)	1,252	72.4%		
Total number of living children	1,252	2.28	1.61	0–12
Number of household members	1,252	2.47	1.26	1–13
Education	1,250	8.07	2.39	2–12
Pre-tax income	1,144	74,065	63,464	0–300,000
Number of years in current job	1,231	14.33	11.72	0–60
Health status and medication				
Number of chronic diseases	1,224	2.43	2.43	0–19
Depression medication (% yes)	1,248	0.8%		
Personality				
Openness to experience	1,250	2.92	0.54	1.00–4.00
Conscientiousness	1,250	3.50	0.44	1.25–4.00
Extraversion	1,250	3.09	0.58	1.40–4.00
Agreeableness	1,250	3.40	0.52	1.80–4.00
Neuroticism	1,250	2.06	0.63	1.00–3.75
Spillover between work and family				
Negative WFS	1,252	10.11	2.87	4–20
Positive WFS	1,250	11.43	2.89	4–20
Negative FWS	1,251	8.30	2.35	4–20
Positive FWS	1,245	13.09	2.85	4–20
Proposed moderator				
Dispositional optimism	1,247	11.81	2.32	3–15
Outcome variables				
Depressive symptoms	1,252	0.48	1.51	0–7
Subjective well-being	1,246	5.26	0.63	2.65–6.67

Note. Education was assessed on a scale of 1 (*No school*) to 12 (*Ph.D, ED. D, MD, LLB, LLD, JD, or other professional degree*).

Table 2. Correlations.

Variables	1	2	3	4	5	6	7	8	9	10
1. Age	-									
2. Sex	.10**	-								
3. Marital status	−.03	.19**	-							
4. Total number of living children	.17**	.03	.27**	-						
5. Number of household members	−.34**	.04	.33**	.32**	-					
6. Education	−.07*	.08**	.02	−.09**	.04	-				
7. Pre-tax income	.02	.31**	.10**	−.002	.02	.38**	-			
8. Number of years in current job	.21**	.12**	.07*	−.01	−.06*	−.01	.21**	-		
9. Number of chronic diseases	.07*	−.19**	−.08**	−.02	−.10**	−.07*	−.14**	−.02	-	
10. Depression medication	−.03	−.05	−.07*	−.03	−.01	−.03	−.05	−.05	.06*	-
11. Openness to experience	.08**	.07*	−.04	−.03	−.04	.18**	.17**	−.07*	−.09**	−.01
12. Conscientiousness	−.01	−.14**	.06*	−.01	−.03	.07*	.06	.02	−.09**	.01
13. Extraversion	.09**	−.08**	−.003	.06*	−.02	−.03	.06	−.01	−.07*	−.02
14. Agreeableness	.09**	−.27**	−.03	.06*	−.03	−.07*	−.09**	−.03	.06*	.02
15. Neuroticism	−.18**	−.12**	−.05	−.09**	.02	−.14**	−.08**	−.01	.23**	.01
16. Negative WFS	−.26**	−.05	−.03	−.08**	.10**	.08**	.08*	−.01	.13**	.08**
17. Positive WFS	.11**	.02	.07*	.04	.01	.05	.14**	.05	−.03	−.01
18. Negative FWS	−.23**	−.02	.02	−.02	.16**	.01	−.02	.03	.10**	.06*
19. Positive FWS	.01	.01	.24**	.15**	.07*	−.03	.10**	.01	−.05	.001
20. Dispositional optimism	.15**	−.003	.03	.09**	−.06*	.07*	.11**	.02	−.15**	−.04
21. Depressive symptoms	−.09**	−.10**	−.11**	−.05	−.03	−.06*	−.09**	−.07*	.22**	.08**
22. Subjective well-being	.21**	.06*	.17**	.13**	−.05	.09**	.21**	.13**	−.31**	−.08**

Variables	11	12	13	14	15	16	17	18	19	20
11. Openness to experience	-									
12. Conscientiousness	.20**	-								
13. Extraversion	.52**	.22**	-							
14. Agreeableness	.35**	.24**	.49**	-						
15. Neuroticism	−.21**	−.20**	−.13**	−.07**	-					
16. Negative WFS	−.08**	−.15**	−.16**	−.08**	.35**	-				
17. Positive WFS	.23**	.06*	.21**	.13**	−.10**	.02	-			
18. Negative FWS	−.12**	−.19**	−.13**	−.06*	.32**	.53**	.08**	-		
19. Positive FWS	.15**	.15**	.22**	.14**	−.13**	.03	.43**	−.06*	-	
20. Dispositional optimism	.31**	.23**	.36**	.26**	−.41**	−.21**	.24**	−.21**	.28**	-
21. Depressive symptoms	−.01	−.06*	−.07*	.04	.16**	.12**	−.07*	.13**	−.08**	−.15**
22. Subjective well-being	.26**	.36**	.37**	.17**	−.46**	−.40**	.27**	−.39**	−.37**	.48**

Variables	21	22
21. Depressive symptoms	-	
22. Subjective well-being	−.30**	-

Note. WFS = Work-to-family spillover; FWS = family-to-work spillover
*$p < .05$, **$p < .01$

1999). PA and NA were assessed using Watson et al.'s (Watson et al., 1988) Positive and Negative Affect Schedule wherein participants indicated on a scale of 1 ("none of the time") to 5 ("all of the time") the extent to which they experienced specific emotions during the past 30 days. PA was assessed with four items (e.g., enthusiastic, proud) while NA was assessed with five items (e.g., afraid, irritable). Composite scores for PA and NA were generated by averaging item scores for each type of affect. Life satisfaction was assessed using a 6-item measure adopted from Prenda and Lachman (2001) and Brim et al. (2004), which asked participants to rate on a scale of 0 ("worst possible") to 10 ("best possible") how satisfied they were with aspects of work, health, and relationships. An overall composite score for general life satisfaction was generated by averaging the scores across these items. Cronbach's α were .86, .81, and .71 for PA, NA, and general life satisfaction, respectively, as reported by MIDUS 3's publishers. An overall subjective well-being index was then created by averaging the composite scores of PA, NA (reverse scored), and general life satisfaction.

Depressive symptoms. Depressive symptoms were assessed by asking participants to indicate "yes" or "no" to seven questions asking whether they had experienced depressive thoughts or feelings during the past 12 months, such as loss of appetite, feeling more tired and low on energy than usual, and excessive thoughts about death (cf., Kessler et al., 1999). The extent to which participants experienced depressive symptoms was assessed in terms of the total number of "yes" responses, which is an approach that corresponds with the third edition of the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders as well as the 10th version of the Composite International Diagnostic Interview (Ryff et al., 2017).

Negative work-to-family spillover. Negative WFS was assessed via the 4-item subscale adopted from Grzywacz and Marks (2000) measure of spillover. The subscale measured respondents' perceived extent to which strain from performing their work role (as opposed to time demands, e.g., Greenhaus & Beutell, 1985) interfered with their family role (Grzywacz, 2000). Participants rated on a scale of 1 ("never") to 5 ("all the time") how often they experienced particular situations while at their current job, such as "stress at work makes you irritable at home" and "your job makes you feel too tired to do the things that need attention at home". Scores on these items were summed to obtain an overall indicator of negative WFS. Cronbach's α was .85 as reported by MIDUS 3's publishers.

Dispositional optimism. Dispositional optimism was assessed via the 3-item dispositional optimism subscale of the revised life orientation test (Lai & Yue, 2000; Segerstrom et al., 2011) in which participants rated their agreement with statements such as "In uncertain times, I usually expect the best" and "I expect more good things to happen to me than bad" on a scale of 1 ("disagree a lot") to 5 ("agree a lot"). Scores on all items were summed to obtain an overall indicator of dispositional optimism. Cronbach's α was .69 as reported by MIDUS 3's publishers. While this reliability score does not reach conventional standards of acceptability (i.e., .70 and above), it is comparable with findings elsewhere (e.g., Glaesmer et al., 2012; Herzberg et al., 2006; Segerstrom et al., 2011).

Covariates. We controlled for several variables to account for their potential confounding effects. For demographics, we adjusted for age, sex, marital status, socioeconomic status, family information (total number of living children and number of household members excluding self), number of years in current job, number of chronic illnesses, and use of depression medication within the past 12 months. Number of years in current job was computed by subtracting the self-reported year of when the participant started working in his/her current job from the year in which the participant completed the MIDUS 3 interview. Negative values were treated as errors and coded as missing. For socioeconomic status, we accounted for highest education obtained and pre-tax income in the last calendar year. We also accounted for positive WFS, negative family-to-work spillover (FWS), and positive FWS via their respective subscales (Grzywacz & Marks, 2000). Composite scores for each type of spillover were created from participants' ratings of the frequency with which they experienced particular work and family situations (1 = "never" to 5 = "all the time"), such as "the things you do at work help you deal with personal and practical issues at home" (positive WFS), "responsibilities at home reduce the effort you can devote to your job" (negative FWS), and "your home life helps you relax and feel ready for the next day's work" (positive FWS). Cronbach's α were .73, .77, and .64 for positive WFS, negative FWS, and positive FWS, respectively, as reported by MIDUS 3's publishers.

Finally, we accounted for the Big Five personality traits (Emmons & Diener, 1985; Matsudaira & Kitamura, 2006), which were assessed via a 25-item adjective-based measure where participants indicated the extent to which each adjective described themselves on a scale of 1 ("not at all") to 4 ("a lot"). The scale was developed for use in MIDUS through a combination of existing personality inventories and has been validated in a prior large study of 1,000 participants (Lachman & Weaver, 1997). Cronbach's α were .77, .56, .75, .78, and .72 for openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism, respectively, as reported by MIDUS 3's publishers.

Data analysis

With dispositional optimism specified as the moderator, moderation analyses were conducted on two relationships: (1) negative WFS and subjective well-being and (2) negative WFS and number of depressive symptoms. To estimate the coefficients of each predictor and their interactions, Ordinary Least Squares (OLS) regression (via the SPSS PROCESS macro; Hayes, 2017) was used for the outcome variable of subjective well-being and Poisson regression (via SPSS Generalized Linear Models) was used for the outcome variable of number of depressive symptoms. Poisson regression has been propounded to be a more rigorous statistical approach when count-based data are involved (Coxe et al., 2009; Hutchinson and Holtman, 2005). Covariates (i.e., demographics, experience of other forms of spillover between work and family, and personality) were controlled in a stepwise manner as shown in Tables 3 and 4. The proposed moderating role of dispositional optimism would be supported if a significant interaction between negative WFS and dispositional optimism on

Table 3. Model summaries of subjective well-being with negative work-family spillover and dispositional optimism as predictors.

	Model 1	Model 2	Model 3	Model 4
	B (*SE*)	*B* (*SE*)	*B* (*SE*)	*B* (*SE*)
Main effect				
Negative WFS	−0.07 (0.01) ***	−0.06 (0.01) ***	−0.05 (0.01) ***	−0.04 (0.01) ***
Dispositional optimism	0.11 (0.01) ***	0.09 (0.01) ***	0.07 (0.01) ***	0.04 (0.01) ***
Two-way interaction				
Negative WFS × Dispositional optimism	0.01 (<0.01) ***	0.01 (<0.01) *	0.01 (<0.01) *	0.01 (<0.01) **
Covariates				
Age		0.01 (<0.01) **	<0.01 (<0.01)	<0.01 (<0.01)
Sex		−0.11 (0.03) **	−0.10 (0.03) **	−0.07 (0.03) *
Marital status		0.18 (0.04) ***	0.12 (0.03) **	0.11 (0.03) **
Total number of living children		0.02 (0.01) *	0.02 (0.01)	0.01 (0.01)
Number of household members		−0.03 (0.01) *	−0.02 (0.01)	−0.02 (0.01)
Education		0.01 (0.01) *	0.02 (0.01) **	0.01 (0.01) *
Pre-tax income		<0.01 (<0.01) ***	<0.01 (<0.01) ***	<0.01 (<0.01) ***
Number of years in current job		<0.01 (<0.01) **	0.01 (<0.01) ***	0.01 (<0.01) ***
Number of chronic diseases		−0.05 (0.01) ***	−0.05 (0.01) ***	−0.04 (0.01) ***
Use of depression medication		−0.09 (0.15)	−0.09 (0.14)	−0.16 (0.13)
Positive WFS			0.02 (0.01) ***	0.02 (0.01) ***
Negative FWS			−0.05 (0.01) ***	−0.04 (0.01) ***
Positive FWS			0.04 (0.01) ***	0.04 (0.01) ***
Openness to experience				−0.01 (0.03)
Conscientiousness				0.20 (0.03) ***
Extraversion				0.18 (0.03) ***
Agreeableness				−0.05 (0.03)
Neuroticism				−0.16 (0.02) ***

Note: Sex was dummy coded with "female" as reference. Marital status was dummy coded with "currently unmarried" as reference. Use of depression medication was dummy coded with "no" as reference.
* $p < .05$, ** $p < .01$, *** $p < .001$.

subjective well-being and number of depressive symptoms is consistently observed across all models.

Results

Subjective well-being

Our moderation analyses on subjective well-being using the SPSS PROCESS macro (Model 1 with mean centring enabled; Hayes, 2017) are summarised in Table 3. We consistently observed significant two-way interactions of negative WFS × dispositional optimism on subjective well-being across four separate models; specifically in Model 1 where the model was unadjusted (model statistics: $F(3, 1237) = 204.39$, $p < .001$, $R^2 = .33$; interaction term: $B = 0.01$, $SE = 0.002$, 95% CI = [0.003, 0.01], $t = 3.55$, $p < .001$; test of highest order unconditional interaction: $\Delta R^2 = .01$, $F(1, 1237) = 12.60$, $p < .001$), Model 2 where demographic variables were controlled (model statistics: $F(13, 1079) = 67.30$, $p < .001$, $R^2 = .45$; interaction term: $B = 0.01$, $SE = 0.002$, 95% CI = [0.001, 0.01], $t = 2.59$, $p = .010$; test of highest order unconditional interaction: $\Delta R^2 = .003$, $F(1, 1079) = 6.72$, $p = .010$), Model 3 where other forms of spillover between work and family were added as covariates (model statistics: $F(16, 1069) = 74.25$, $p < .001$, $R^2 = .53$; interaction term: $B = 0.01$, $SE = 0.002$, 95% CI = [0.001, 0.01], $t = 2.53$, $p = .012$; test of highest order unconditional interaction: $\Delta R^2 = .003$, $F(1, 1069) = 6.38$, $p = .012$), and Model 4 where personality factors were included (model statistics: $F(21, 1063) = 70.32$, $p < .001$, $R^2 = .58$; interaction term: $B = 0.01$, $SE = 0.002$, 95% CI = [0.003, 0.01], $t = 3.46$, $p = .001$; test of highest order unconditional interaction: $\Delta R^2 = .01$, $F(1, 1063) = 11.97$, $p = .001$).

Interestingly, although an attenuation of the strength of the relationship between negative WFS and subjective well-being (i.e., moderating effect) was observed as dispositional optimism levels increased, simple slopes analyses indicated that negative WFS remained significantly, negatively associated with subjective well-being across all models, regardless of participants being of lower dispositional optimism (−1*SD*) as shown in Model 1 ($B = -0.09$, $SE = 0.01$, $t = -12.22$, $p < .001$), Model 2 ($B = -0.07$, $SE = 0.01$, $t = -10.78$, $p < .001$), Model 3 ($B = -0.06$, $SE = 0.01$, $t = -8.51$, $p < .001$), and Model 4 ($B = -0.05$, $SE = 0.01$, $t = -7.52$, $p < .001$), or higher dispositional optimism (+1*SD*) as shown in Model 1 ($B = -0.05$, $SE = 0.01$, $t = -7.11$, $p < .001$), Model 2 ($B = -0.05$, $SE = 0.01$, $t = -6.87$, $p < .001$), Model 3 ($B = -0.04$, $SE = 0.01$, $t = -5.08$, $p < .001$), and Model 4 ($B = -0.02$, $SE = 0.01$, $t = -3.02$, $p = .003$).

Together, these results suggest that dispositional optimism exerted a moderating effect on the relationship between negative WFS and subjective well-being, in that this negative association is significantly weakened with higher levels of dispositional optimism. A contingency effect, though, was not found, in that this negative association remained statistically significant even at higher levels of dispositional optimism. This suggests that participants with higher levels of dispositional optimism continued experiencing some degree of reduced subjective well-being in the face of negative WFS. The simple slopes trend graphs for each model are illustrated in Figure 1.

Depressive symptoms

Our moderation analyses on number of depressive symptoms using Poisson regression are summarised in Table 4. A statistically significant two-way interaction was not observed

Table 4. Model summaries of depressive symptoms experienced with negative work-family spillover and dispositional optimism as predictors.

	Model 1	Model 2	Model 3	Model 4
	B (*SE*)	*B* (*SE*)	*B* (*SE*)	*B* (*SE*)
Main effect				
Negative WFS	0.11 (0.05)*	0.15 (0.06) *	0.11 (0.06)	0.12 (0.06)
Dispositional optimism	−0.13 (0.06) *	0.01 (0.06)	0.03 (0.06)	0.08 (0.07)
Two-way interaction				
Negative WFS × Dispositional optimism	−0.001 (<0.01)	−0.01 (0.01)	−0.01 (0.01)	−0.01 (0.01) *
Covariates				
Age		−0.02 (0.01) ***	−0.02 (0.01) **	−0.02 (0.01) **
Sex		−0.20 (0.10) *	−0.25 (0.10) *	−0.29 (0.11) **
Marital status		−0.36 (0.10) ***	−0.38 (0.10) ***	−0.33 (0.10) **
Total number of living children		−0.04 (0.03)	−0.05 (0.03)	−0.06 (0.03)
Number of household members		−0.01 (0.04)	−0.01 (0.04)	<0.01 (0.04)
Education		−0.03 (0.02)	−0.03 (0.02)	−0.05 (0.02) *
Pre-tax income		<0.01 (<0.01) **	<0.01 (<0.01) *	<0.01 (<0.01)
Number of years in current job		−0.02 (<0.01) ***	−0.02 (<0.01) ***	−0.02 (<0.01) ***
Number of chronic diseases		0.13 (0.01) ***	0.13 (0.01) ***	0.13 (0.01) ***
Use of depression medication		0.43 (0.24)	0.43 (0.25)	0.56 (0.25) *
Positive WFS			−0.05 (0.02) **	−0.06 (0.02) **
Negative FWS			0.09 (0.02) ***	0.08 (0.02) ***
Positive FWS			0.01 (0.02)	0.01 (0.02)
Openness to experience				0.44 (0.10) ***
Conscientiousness				−0.19 (0.10)
Extraversion				−0.26 (0.10) *
Agreeableness				0.18 (0.11)
Neuroticism				0.27 (0.08) **

Note: Sex was dummy coded with "female" as reference. Marital status was dummy coded with "currently unmarried" as reference. Use of depression medication was dummy coded with "no" as reference.
* $p < .05$, ** $p < .01$, *** $p < .001$.

across three separate models; specifically in Model 1 where the model was unadjusted (model statistics: likelihood ratio χ^2 (3) = 169.29, $p < .001$; interaction term: $B = -0.001$, $SE = 0.005$, 95% CI = [−0.01, 0.01], Wald $\chi^2 = 0.07$, $p = .792$), Model 2 where relevant demographic variables were controlled (model statistics: likelihood ratio χ^2 (13) = 375.02, $p < .001$; interaction term: $B = -0.01$, $SE = 0.01$, 95% CI = [−0.02, 0.001], Wald $\chi^2 = 3.06$, $p = .080$), and Model 3 where other forms of spillover between work and family were included as covariates (model statistics: likelihood ratio χ^2 (16) = 398.22, $p < .001$; interaction term: $B = -0.01$, $SE = 0.01$, 95% CI = [−0.02, 0.001], Wald $\chi^2 = 2.92$, $p = .088$). A statistically significant interaction effect was observed only in Model 4, where personality factors were included as covariates (model statistics: likelihood ratio χ^2 (21) = 435.06, $p < .001$; interaction term: $B = -0.01$, $SE = 0.01$, 95% CI = [−0.02, −0.0005], Wald $\chi^2 = 4.18$, $p = .041$). These results generally suggest that dispositional optimism may not serve as a substantive buffer in the relationship between negative WFS and number of depressive symptoms experienced.

Discussion

Based on a large sample of working midlife adults in the United States drawn from the nationally representative MIDUS dataset, dispositional optimism was consistently observed to moderate the link between negative WFS and subjective well-being. Specifically, we observed that a higher level of dispositional optimism was associated with an attenuation of the negative relationship between negative WFS and subjective well-being. This finding lends support to our proposition that dispositional optimism could be an important psychological resource in buffering against the deleterious effects of negative WFS on psychological health. In addition, including a wide range of carefully chosen control variables, including marital status, tenure in current job, and use of depression medication, as well as other forms of spillover experienced between work and family and personality factors, allowed us to establish the utility of enduring optimistic orientations over and above other relevant factors, thus increasing our confidence in the robustness of this finding.

This result is also consistent with research showing that dispositional optimism facilitates resilience, coping, and better psychological health (e.g., Riolli & Savicki, 2003). Several mechanisms that underlie the beneficial effects of optimism were discussed at the beginning of this paper, including its capacity to promote positive expectancies, place a greater weight on positive events and appraise negative events as temporary or situational, and prompt coping strategies that constructively deal with challenges. Optimism is an important precursor to effective coping – when devoid of hope that things will get better, people are less likely to engage in behaviours that can push themselves through difficult times. These ideas are important in shaping recommendations that laypersons may adopt as well as therapies that practitioners may administer. When viewed against the broader literature on psychological resources from which people can draw on to cope with adversity (e.g., Windle & Woods, 2004), this finding attests to the psychological armaments at our disposal that may be used to improve psychological health and which deserve further empirical investigation.

Despite the consistent observation of a buffering effect of dispositional optimism on the relationship between negative WFS and subjective well-being, however, support for dispositional optimism as a potential

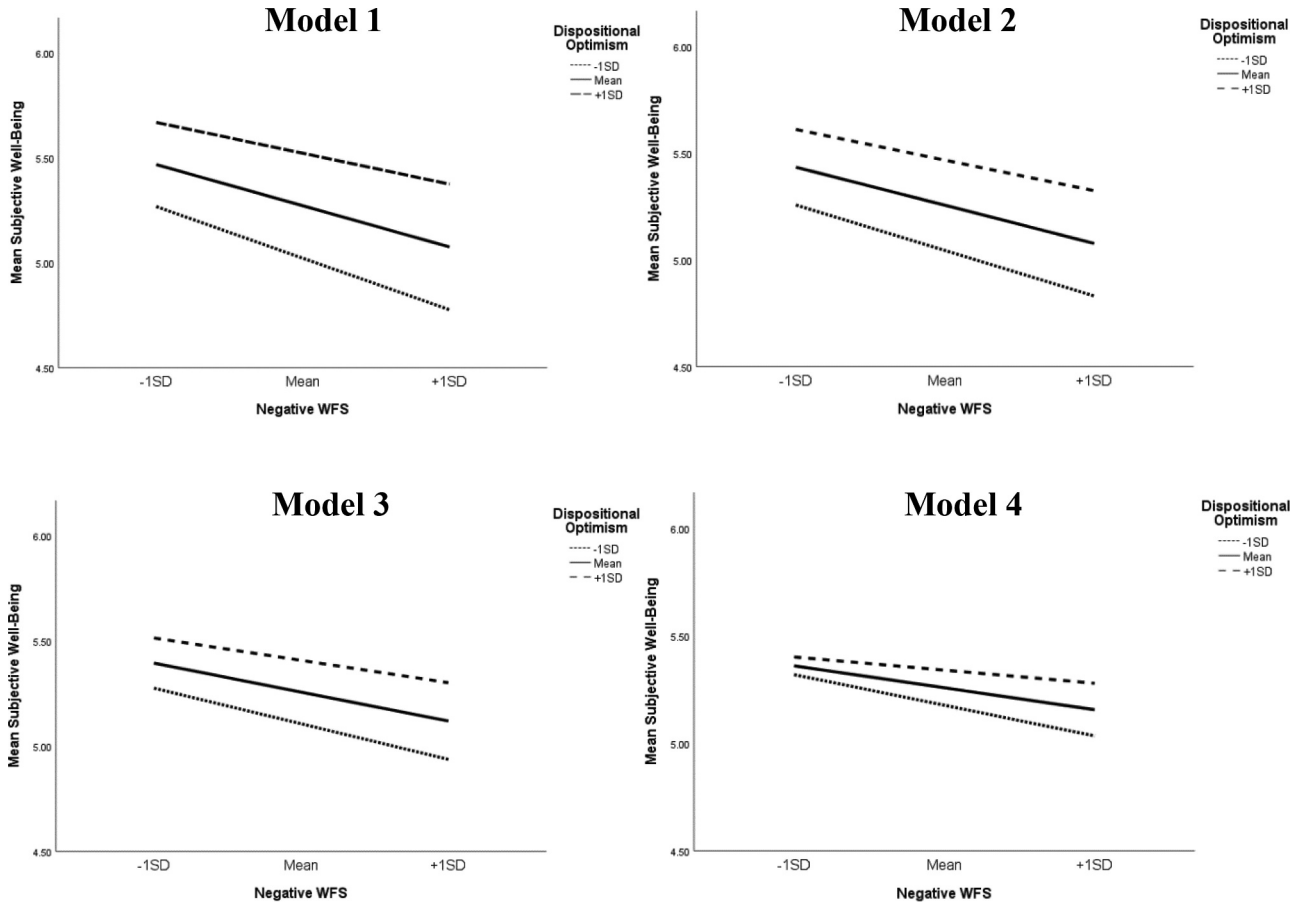

Figure 1. Simple slopes (i.e., unstandardized coefficients) of negative work-family spillover predicting subjective well-being with dispositional optimism at 1 *SD* above and below the mean.

buffer against the experiencing of depressive symptoms was much less evident. Specifically, an interaction effect between negative WFS and dispositional optimism was consistently observed to be non-significant across all but one model (where every single covariate relevant to this study was controlled for). This suggests that the potential buffering utility of dispositional optimism may be limited to day-to-day subjective well-being and may not extend to the domain of mental health issues. That being said, it is also possible that a true interaction effect exists, but with a small effect size such that it was not robustly detected in a non-clinical sample with relatively low base rate of depressive symptoms experienced. Further studies are required to ascertain this.

Nonetheless, our results indicate the potential utility of cultivating an enduring optimistic orientation (e.g., Brooks, 2002; Scheier & Carver, 1992) to bolster the mental fortitude of people suffering from negative WFS – an increasingly prevalent outcome in modern settings (Greenhaus & Powell, 2006; Luthans et al., 2006) – particularly through diluting the adverse impact of negative WFS on subjective well-being. The current investigation is also timely given the proliferation of remote occupational practices due to the COVID-19 outbreak, such as mandatory work-from-home arrangements (Choudhury, 2020) that have further exacerbated the encroachment of work on family life, and a growing number of experts have stressed the importance of remaining optimistic during these trying times (Arslan et al., 2020; Orlowski, 2020). Indeed, our findings suggest that individuals are not necessarily helpless despite their limited agency in modifying structural factors that blur the boundaries between work and other life roles (Marchese et al., 2002; Tayfur & Arslan, 2012) and illuminate the potential of optimism-driven therapeutic approaches as means of treatment or self-empowerment, to which further studies are encouraged to examine.

Limitations and future directions

Although the current study employed a large sample and ruled out many confounding factors, some limitations exist. First, as the dataset is nationally representative only for American midlife adults, our findings may not be generalizable to individuals from other countries, cultural backgrounds, or age groups. For example, small but consistent differences in dispositional optimism can be predicted by cultural dimensions such as egalitarianism and individualism (Fischer & Chalmers, 2008). Similarly, age has been shown to negatively predict dispositional optimism (Durbin et al., 2019). Culture and age can also interact to predict dispositional optimism – for instance, You et al. (2009) found that older Americans were more optimistic than younger Americans, whereas younger Chinese were more optimistic

than older Chinese. As such, future studies are encouraged to replicate and validate these findings with samples from other populations, and to examine how cultural and age-related factors may independently and interactively influence the effects of dispositional optimism on negative WFS and psychological health.

The cross-sectional and correlational design of the current study necessitates caution with causal inferences. Although the significant interactions between dispositional optimism and negative WFS on subjective well-being suggest that dispositional optimism reduced the impact of negative WFS, other unforeseen variables may also account for the interactions observed. Likewise, the non-significant interaction effect on number of depressive symptoms may also be attributable to unforeseen factors, such as the low base rate of depressive symptoms experienced in the current sample. Although longitudinal data exists in the MIDUS project that may permit cross-lagged analyses and speak to causality, idiosyncratic changes in working and family conditions over time (e.g., changes in job position, nature of job tasks, familial relationships) were not assessed in the dataset. As such, WFS assessed across the time points – along with their cross-temporal relationships with the measured outcomes variables – are likely to be confounded and will violate the assumptions of synchronicity and stationarity necessitated by cross-lagged analyses (Corrigan et al., 1994; Kenny & Harackiewicz, 1979). Furthermore, as cross-lagged analyses are fundamentally correlational in nature, they also do not allow for causality to be established conclusively (Rogosa, 1980; Selig & Little, 2012). Thus, experiments that manipulate participants' level of optimism (e.g., getting them to watch videos or read passages that vary in optimism and pessimism) and assess their responses to difficult scenarios thereafter are recommended.

More fine-grained analyses of the mechanisms that underlie optimism will also be important. Indeed, though our findings add to a growing literature that recognizes the usefulness of dispositional optimism as a psychological resource against various life stressors (e.g., Carver et al., 2010; Jobin et al., 2014; Riolli & Savicki, 2003; Taylor et al., 2012), it is still rather unclear as to which particular mechanism(s) drive its protective effects in which circumstance. A precise understanding of these mechanisms will also allow both researchers and practitioners alike to refine their approaches. For instance, Peters et al. (2010) showed that participants who engaged in 20 minutes of positive future-oriented thinking (through a writing and imagination task) reported expecting more positive outcomes in the future, which is a key component of dispositional optimism. This specific focus can be used to guide intervention studies by comparing the impact of negative WFS on psychological health between individuals assigned to engage in more positive future-oriented thinking versus non-positive future-oriented thinking. As the benefits associated with dispositional optimism are particularly crucial in today's stressful work environments, future research that examines the interplay between varying levels of dispositional optimism and workplace conditions will likely pay dividends. More broadly, our study underscores the importance of intrapersonal factors – the less studied half of Bakker and Demerouti's (2007, 2017) job demands-resources model – in mitigating the impact of negative WFS upon which future studies may build to identify psychological resources that are more specific to particular work contexts.

Conclusion

The present study examined dispositional optimism as a potential psychological buffer against the deleterious association between negative WFS and psychological health and provided preliminary evidence of efficacy for one of the two psychological health outcomes assessed – subjective well-being. While firm conclusions are still premature, especially given our null findings for depressive symptoms - the other psychological health outcome assessed, our study highlights the potential for psychological resources to be harnessed against negative WFS and research in this understudied area will likely go a long way towards informing strategies for improved psychological health.

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