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Empirical Article

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Emotional job demands diminish employees' sympathy over 9 years, but only for those with a low learning goal orientation

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Abstract

Many professions require emotional effort from employees to perform their jobs effectively. Research on the consequences of such emotional job demands (EJDs) for employees has yielded mixed findings with only a few longitudinal studies. This study's aim is to improve the understanding of how EJDs affect the development of employees' emotional functioning over time, specifically the degree of sympathy they experience toward others, and which factors enhance or buffer this relationship. Drawing on the theoretical model of strengths and vulnerabilities integration, we predict that occupation-level EJDs reduce employees' sympathy over a 9-year time period. At the same time, we predict that a learning goal orientation (LGO), the motivation for task mastery and self-improvement, buffers the potentially negative effects of EJDs on sympathy changes. We test our model using data from $N = 831$ working adults from the second and third waves of the Midlife in the United States survey in combination with data from the Occupational Information Network. In line with predictions, results from latent change score models show that although sympathy on average increases over the 9-year span, EJDs have a negative effect on these changes and a LGO moderates this effect so that EJDs have a negative effect on sympathy changes only for employees low in LGO. We discuss implications for theory and practice.

Keywords: sympathy, emotional job demands, longitudinal study, age, learning goal orientation

Exerting emotional effort is a frequent requirement in many professions (Morris & Feldman, 1996). In fact, work is historically becoming more emotional in nature, not only but also because of the rise of the service sector in many economies (Eichengreen & Gupta, 2013) and many jobs involving regular interactions with others, in particular customers, clients, or the public. The resulting emotional job demands (EJDs) require employees to show or suppress certain positive and negative emotions (e.g., service with a smile) (Diefendorff et al., 2006), adhere to feeling rules that require employees to keep a certain internal feeling state (e.g., neutrality as in judges) (Trougakos et al., 2011), or regulate their own emotions in response to emotion-eliciting events at work (e.g., sadness in healthcare workers) (Diefendorff & Gosserand, 2003). Typical jobs that are high in EJDs comprise caring professions (e.g., nurses) and social control jobs (e.g., police officers) (Humphrey et al., 2008). People working in those high EJD jobs will often experience sympathy (Zapf et al., 2001). Sympathy describes feelings of compassion, warmth, or concern about an interaction partner together with the motivation to help or lower their negative feelings (Lee, 2009; Malbois, 2023; Singer & Lamm, 2009). It predicts prosocial behavior (Eisenberg et al., 1989) and thus contributes to team and organizational functioning more broadly.

A large body of research suggests that EJDs are a double-edged sword and can be both beneficial and harmful for employees' emotional experience (see Hülsheger & Schewe, 2011 for a meta-analysis). However, most of the existing studies have investigated the effects of EJDs on employee well-being using cross-sectional designs (e.g., Pugliesi, 1999) or longitudinal designs with shorter time lags (e.g., 1 year in Philipp & Schüpbach, 2010; but see Reh et al., 2021 for an exception). Consequently, we know a lot less about how EJDs affect employees' emotional experience such as their level of sympathy in the long run. This long-term perspective is important as EJDs accompany employees through many years if not through the entirety of their career. Moreover, since sympathy plays a vital role in employees performing their job effectively (Alligood, 1992; Mercer & Reynolds, 2002), the question arises whether jobs with varying EJDs foster or diminish employees' sympathy over time and which factors affect those trajectories.

To address these important questions, this study's goal is to investigate the effect of EJDs on long-term changes in

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employees' sympathy. In our theorizing, we draw on the theoretical model of strengths and vulnerabilities integration (SAVI) from the lifespan psychology literature (Charles, 2010) that is gaining increasing attention in the IO-literature and in the context of EJDs (Reh et al., 2021). We reason that EJDs inhibit (i.e., have a negative effect on) the on-average positive changes in sympathy over time. The reason is that EJDs may activate aging-related vulnerabilities so that employees in such jobs show lower sympathy over time. Moreover, we propose that a learning goal orientation (LGO) will moderate this effect in the sense that it activates the strength pathway outlined in SAVI and thereby buffers the negative effect of EJDs on changes in sympathy. Individuals with a strong LGO tend to be motivated to master tasks and to strive to improve upon their abilities (VandeWalle, 2003). This attitude, when embraced by employees in jobs with high EJDs, should balance the negative effects of EJDs and keep employees engaged with their emotionally demanding jobs, allowing them to increase their sympathy over time. We test our theoretical model using longitudinal data over on average 9 years, pairing data on employees' sympathy and LGO from the second and third waves of the Midlife in the United States study (MIDUS) with data on EJDs from the Occupational Information Network (O*NET). Figure 1 shows our theoretical model.

This paper makes several contributions to the literature on EJDs and their impact on employees' long-term affective experience. First, our study contributes to contextualizing emotional aging and enriches the SAVI model (Charles, 2010) with work-related factors to better understand interindividual differences in emotional experiences across the working lifespan. Moreover, the interactive relationship between EJDs and LGO on changes in sympathy contributes to a better understanding of when and why older employees sometimes show better emotional functioning than their younger counterparts (Doerwald et al., 2016). While on average, employees show higher sympathy over the course of their working life, these increases very much depend on the level of EJDs they encounter and on whether they pursue learning goals. In this regard, our research also contributes to a better understanding of how aging, occupational demands, and individual differences interact to shape adult development. Second, by establishing the negative effect of EJDs on changes in sympathy, we unravel long-term emotional repercussions of EJDs beyond well-being. Thereby, we add to and extend research on the effects of emotional labor by taking a more nuanced perspective that moves beyond intrapersonal outcomes such as well-being, burnout, or job satisfaction (e.g., Hülsheger & Schewe, 2011; Reh et al., 2021) to also include interpersonal affective experiences (sympathy). Finally, by introducing individuals' LGO as an individual-level variable that buffers the negative effects of EJDs on changes in sympathy, we introduce an important boundary condition to the long-term consequences of EJDs and create a better understanding of when and why those effects are stronger or weaker. While previous research on emotional labor often focused on how individuals deal with emotional demands in terms of emotion regulation (surface vs. deep acting, Hülsheger & Schewe, 2011), we introduce an additional perspective here, namely individual differences that enable employees to approach those demands differently.

Emotional job demands and changes in sympathy

Prior research suggests that EJDs do not influence every employee in the same way (Judge et al., 2009). Factors such as the level of job control (Gonzalez-Mulé & Cockburn, 2017) or employees' emotion regulation strategies (Hülsheger & Schewe, 2011) affect how EJDs unfold. Moreover, the

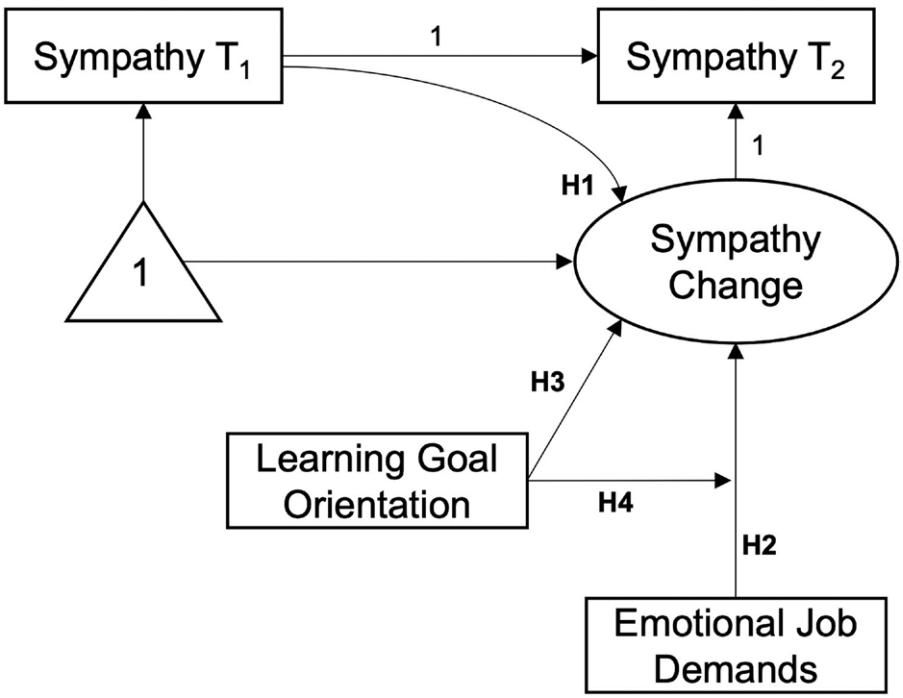

Figure 1. Statistical modeling of the theoretical model.

long-term effects of EJDs can differ from their short-term influence (Ford et al., 2014). These multidirectional findings are also reflected in theoretical arguments as to how EJDs can strengthen employees' resources (Bhave & Glomb, 2016) versus how they deplete respective resources over time (Holman et al., 2008). Also building on SAVI (Charles, 2010), Reh et al. (2021) outline several pathways how EJDs at the occupational level may set employees on positive or negative trajectories in their well-being and found that medium, high, and very high levels of EJDs lead to long-term decreases in positive facets of well-being (positive affect and job satisfaction), but interestingly leave negative affect trajectories unaffected.

Besides the implications for employees' personal well-being, the question arises how EJDs affect those emotional experiences that they need to meet their job demands effectively, such as sympathy. Sympathy encompasses feelings of compassion, warmth, and concern about others and also involves the drive to help others in need (Lee, 2009; Singer & Lamm, 2009), all of which form important parts in EJD professions. It represents one subcomponent of affective empathy (Davis, 2016; Wieck & Kunzmann, 2015)[1] that is other-*oriented*, but does not require to share the other person's feelings (Lewis et al., 2010). Understanding the long-term *social* consequences of EJDs in addition to their short-term effects (Wieck et al., 2021) and long-term effects on personal well-being (Reh et al., 2021) allows both researchers and practitioners to evaluate whether EJDs support or impair employees' emotional functioning over time.

Before diving into the effect of EJDs on changes in sympathy, it is important to first clarify how sympathy normatively changes across the adult lifespan to then, drawing on the SAVI model (Charles, 2010), delineate how EJDs and LGO interact with the effects of time.

According to a large body of research in lifespan psychology, individuals increasingly prioritize emotional goals as they age because their remaining time left to live decreases (Carstensen, 2006). These emotional goals focus on feelings states, emotional satisfaction, and a sense of belonging (Carstensen et al., 1999). This motivational shift explains why older in comparison to younger adults often enjoy similar or even higher well-being (Scheibe & Carstensen, 2010). A key factor for achieving and maintaining higher well-being is high-quality social relationships, and sympathy is an important ingredient for cultivating those (Davis, 2018). Sympathy should thus increase across adulthood because of older adults' higher motivation and their experience and skills to regulate their emotions (Scheibe & Carstensen, 2010). Previous research indeed found that older versus younger adults show higher or at least similar levels of sympathy (e.g., Sze et al., 2012; Wieck et al., 2021). We seek to replicate previous cross-sectional evidence for age-related increases in sympathy (Wieck et al., 2021) in our longitudinal sample and hypothesize:

Hypothesis 1: Employees' sympathy increases over time.

[1]The other affective component is emotional congruence (sharing the other's emotions). Both sympathy and emotional congruence as affective empathy components can be differentiated from empathic accuracy as cognitive empathy component (see Davis, 2018; Wieck & Kunzmann, 2015; Wieck, Kunzmann & Scheibe, 2021). Note that other researchers conceptualize sympathy as an independent construct from empathy rather than a subcomponent of empathy (Lee, 2009; Malbois, 2023; Singer & Lamm, 2009).

Whereas research from lifespan psychology generally suggests that individuals' emotional experience, including sympathy, improves or remains stable over the lifespan (Scheibe & Carstensen, 2010), these changes are subject to individual differences and contextual influences (Charles, 2010). Most adults spend a large share of their adult life at work; therefore, job demands such as EJDs have the potential to shape individuals' emotional development (Gonzalez-Mulé & Cockburn, 2017; Reh et al., 2021; Scheibe & Kooij, 2024).

Previous research on EJDs and sympathy is rather sparse. One recent study found that emotional dissonance, which is a frequent consequence of EJDs, is associated with reduced sympathy (Park et al., 2019). Emotional dissonance describes the mismatch of emotion(s) that employees genuinely feel internally and the emotion(s) that they show externally, for instance, when a customer mistreats an employee but the employee needs to stay friendly and polite (Holman et al., 2008). The effort to fake or suppress emotions depletes employees' resources and they consequently have less resources to engage with the emotions of others and show sympathy (Park et al., 2019). Another study found that older in comparison to younger workers experience less emotional dissonance when they are required to show neutral displays, but they are also more sensitive to emotional dissonance as well as to sensitivity demands (Scheibe et al., 2015), suggesting that over time people do not generally deal better or worse with EJDs. However, not all jobs high in EJDs prompt emotional dissonance and there are other mechanisms at play with regards to EJDs and sympathy. A recent study by Wieck et al. (2021) found that EJDs did not moderate age differences in sympathy. At the same time, the above-mentioned studies were cross-sectional, which leaves open the question how EJDs shape changes in sympathy.

Drawing on the theoretical model of SAVI (Charles, 2010), we will outline in the following why EJDs should negatively affect long-term (i.e., changes in) sympathy in employees and how a LGO can buffer these effects. Strengths and vulnerabilities integration posits that adult development, in particular with regards to emotional functioning, is shaped by the interplay between age-related gains (i.e., strengths) and losses (i.e., vulnerabilities). In the organizational literature, SAVI has been used as a framework to explain phenomena such as aging-associated changes in well-being, stress, or self-regulation at work (Diefendorff et al., 2015; Doerwald et al., 2016; Reh et al., 2021; Zacher & Rudolph, 2022). On the strengths side, SAVI states that life experience is an important resource of older people that helps them in reaching their emotional goals by more effectively dealing with emotionally challenging situations (Charles, 2010). On the vulnerabilities side, SAVI points to physiological declines that make people more vulnerable to stressors as they grow older (Charles, 2010). Importantly, older adults need more time to recover from stressors (Wrzus et al., 2014). Being exposed to intense and recurring stressors will thus deplete older employees resources more than those of younger employees (Ashkanasy, 2002).

The continuous depletion of resources is one way in which higher EJDs may lead to decreased sympathy. One the one hand, high EJDs frequently put employees in emotionally challenging situations and create the need to regulate emotions and recover from these episodes (Park et al., 2019). With greater need for recovery over time (Wrzus et

al., 2014), frequent and intense emotional episodes at work will increasingly deplete employees' resources. Moreover, restrictions of the workplace prevent employees from using helpful emotion regulation strategies such as avoidance or diverting their attention (Davis et al., 2009). These strategies are opposite to the requirements of EJDs where engaging with unpleasant situations such as angry customers or trauma victims forms a core part of the job. We reason that, together, those processes will leave employees with less resources and motivation to show sympathy to others. In sum, we hypothesize:

Hypothesis 2: EJDs have a negative effect on employees' changes in sympathy.

The moderating role of employees' learning goal orientation

While we argue that EJDs will, on average, suppress increases in employees' experience of sympathy over time, this relationship will likely not manifest itself in the same way for everyone. We expect the extent to which EJDs inhibit the positive change in sympathy to depend on employees' LGO. We reason that LGO may buffer the negative effects of EJDs on changes in sympathy because it allows employees to capitalize on the positive effects of life (work) experience as outlined in the strength pathway in SAVI. Even though employees in high EJD jobs generally accumulate *experience* in emotionally challenging situations, this experience does not necessarily translate into *expertise* in dealing with them as a non-significant effect of EJDs on age differences in sympathy in a recent study suggests (Wieck et al., 2021). The question thus arises which factors allow employees to activate the strength of life experience or, at the same time, attenuate the vulnerability pathway of increased sensitivity to stressors.

A LGO is one out of three goal orientations[2] that describe the goals that individuals hold in achievement situations (Dweck, 1986) such as at work, at school, or in sports, the standards they use to evaluate their abilities and progress towards goals, as well as their self-regulatory strategies. Individuals with a strong LGO seek to develop themselves by mastering tasks and improving their abilities (Ames & Archer, 1988). They seek to gain knowledge, increase their competence, and understand new things. They enjoy learning for its own sake and view achievement situations as opportunities to develop their skills (Dweck, 1986). To do so and to use and reach their potential, they are willing to take risks and invest time if there is a chance to learn. Accordingly, they chose challenging environments and constantly look out for learning opportunities as they enjoy challenge and learning even if they have to work hard for it. Together, this focus implies that individuals with a high LGO feel competent when they can build their ability by mastering tasks or improving on a task. Importantly, learning-oriented individuals interpret failure as a chance to improve and as valuable feedback rather than as a threat (Dweck, 1986).

Originating from the educational psychology literature (Dweck, 1986), the construct of a LGO shows some overlap with certain constructs from the lifespan psychology literature, such as control striving processes which can be treated as malleable. While goal orientations may also refer to situational goal preferences in achievement situations (i.e., state goal orientations, Payne et al., 2007), the majority of the organizational literature has focused and measured LGO as a stable individual difference which is also the perspective that we take in this study.

With regards to the relationship between LGO and changes in sympathy, we reason that the way individuals high in LGO deal with stressful situations and potential failure also holds in the interpersonal domain and generalizes to individuals' interpersonal relationships at work. To build and maintain successful interpersonal relationships, empathy, in particular sympathy as an affective component, are of crucial importance (Davis, 2018). As such, we expect that employees high in LGO should be motivated to engage more with others' experiences and suffering in interpersonal situations over time. While these experiences can cause distress in the short term, for instance, in a conflict, employees with a high LGO should learn to build the necessary emotion regulation skills that allow them experiencing sympathy towards others without harming their own emotional well-being. Therefore, we expect that employees will show stronger increases in sympathy the higher their LGO.

Hypothesis 3: An LGO has a positive effect on employees' changes in sympathy.

Moreover, we expect that LGO will buffer the negative effect of EJDs on changes in sympathy. The growth-oriented mindset of an LGO should prompt employees to approach EJDs as challenges and opportunities to improve their emotion regulation skills (Elliot & McGregor, 2001). Whereas some employees might disengage from their interpersonal encounters and relationships at work as a response to cope with EJDs and protect their well-being, we reason that employees high in LGO will engage more with these situations to learn from them. EJDs often entail so-called sympathy demands that require employees to feel concern and warmth for clients or customers when they suffer (Zapf et al., 1999). To meet these demands, employees need higher sympathy so being able to experience and show more sympathy over time should help them master their job. Their positive attitude toward failure further should protect them from experiencing EJDs as an extreme stressor, leaving them with more emotional resources to show sympathy to others. While we do not imply that EJDs do not cause stress to employees with a high LGO, we do expect that the negative consequences of EJDs on changes in sympathy would at least be leveled.

Hypothesis 4: Employees' LGO buffers the negative relationship between EJDs and changes in sympathy. The negative effect of EJDs is stronger at low in comparison to high levels of LGO.

[2]Besides a LGO, the goal orientation framework includes two other goal orientations, a performance prove orientation and a performance avoidance orientation which share the notion of evaluating their competence through comparisons with others. Individuals with a performance prove goal orientation seek to demonstrate their competence by outperforming others and receiving favorable judgments. Individuals with a performance avoidance orientation focus on not appearing incompetent in the eyes of others and avoiding negative evaluations (Vandewalle, 1997). In this study, we focus on individuals' LGO as it represents both an attitude and a resource in the context of EJDs. Both performance orientations are less relevant in our study as they focus on comparisons with others whereas the effects of EJDs on sympathy reflect intra-individual affective processes.

Methods

We explored the effects of EJDs on long-term changes in sympathy using two publicly available data sources. The Midlife in the United States (MIDUS) survey (Brim et al., 2004) provided data on sympathy, LGO, and covariates. These data were matched via participants' occupational codes with data on EJDs at the occupational level from the Occupational Information Network Database (O*NET; Peterson et al., 2001).

The MIDUS survey is a national study in the United States that samples adults with the goal to understand how people age, in particular with regards to their health and well-being in relation to behavioral, social, and psychological factors (Brim et al., 2004). The MIDUS survey consists of three waves with the first one starting in 1995/1996. For this study, we took the second (years 2004–2006, MIDUS II) and third waves (years 2013–2014, MIDUS III) of the study as our outcome variable, sympathy, was only added to the study in MIDUS II.

The O*NET (https://www.onetonline.org) is a public online database and exists since the 1990s with the purpose to systematically collect information about jobs. Professions are rated by occupation analysts, occupation experts, and workers regarding specific work characteristics such as activities on the job or the context of the work. Occupation experts are people who have worked in the occupation for at least 1 year and have 5 years of experience as an incumbent, trainer, or supervisor. Additionally, they must have had experience with the occupation within the last 6 months. Moreover, job incumbents are sampled using a two-step process. First, a random sample of businesses is targeted that is expected to employ workers in a certain occupation. Next, a random sample of incumbents in those occupations is surveyed. Importantly, the O*NET uses a common language of descriptors for all occupations, which allows researchers to make comparisons across occupations. Glomb et al. (2004) identified work features that represent different job demands, including EJDs, using a factor analysis on the O*NET. We matched the MIDUS and O*NET data (downloaded in 2018) via participants' occupational codes and translated the Standard Occupational Classification (SOC) codes in the O*NET to the census (OCC) codes in MIDUS[3].

Sample

We derived our final sample by matching the second and third waves of the MIDUS study, keeping participants who were employed at both time points and in the years in-between, and had an occupational code that could be matched to the O*NET. This resulted in a sample of $N = 831$ individuals, 45% of which were female and on average 49 years old ($SD = 8.40$, range = 33–77 years) at the first measurement point (MIDUS II). With regards to the age distribution, 12% of the participants were between 30 and 39 years old at MIDUS II, 44% were between 40 and 49 years old, 33% were between 50 and 59 years old, 10% were between 60 and 69 years old, and 1% was 70 and 77 years old. Participants came from diverse occupational backgrounds, worked on average 44 hours per week ($SD = 13.6$) and 49% of them were in a position in which they supervised others. With regards to education, 19% had a high school degree, 28% graduated from college, and 13% graduated with a master's degree. Of the total sample, 77% were married and 11% divorced. Since MIDUS II and III were both collected over more than one year, lag length differed slightly between participants ($M = 8.95$, $SD = 0.31$, range = 8–10, median = 9) with 90% of participants having a lag of 9 years between measurement points.

Measures

Sympathy (T1 and T2)

Sympathy was measured at T1 and T2 using three items of the sympathy scale by Uchida and Kitayama (2001). The items were "I think nothing is more important than to be sympathetic to others," "I am moved when I hear of another person's hardship," and "Even when things are going well for me, I can't be happy if I have a friend who is in trouble." Items were rated on a 7-point scale ranging from "1 = *strongly agree*" to "7 = *strongly disagree*." We reverse-coded the scale anchors so that higher values reflect higher degrees of sympathy. The original scale included a fourth item ("My sympathy has its limits") which we decided to exclude based on very low reliabilities (Cronbach's $\alpha = 0.49$ for T1 and $\alpha = 0.44$ for T2) and low factor loadings (T1 = 0.19, T2 = 0.17). Cronbach's alphas for the 3-item measure were $\alpha = 0.57$ for T1 and $\alpha = 0.52$ for T2. Albeit on the low side, they are comparable to other studies that used this measure from the MIDUS data (e.g., 0.50 in Srirangarajan et al., 2020). For our analyses, we used latent scores for sympathy at both time points that are free from measurement error. Factor loadings for the three items ranged from 0.46 to 0.65. Moreover, we included the sympathy scale in two content validation studies that we report in the Supplementary material where the measure showed higher reliability ($\alpha = 0.69$ and 0.77, respectively).

Emotional job demands (T1)

Emotional job demands were derived from the O*NET in 2018/2019 (www.onetonline.org, Peterson et al., 2001). More specifically, we took those features of the work context and work activities that Glomb et al. (2004) identified as representing EJDs (versus cognitive, physical, and managing demands). Those features were rated by around 28 incumbents, on average. The five items were "Assisting and caring for others" (mean incumbent ratings [MIR] = 28.04, $SD = 9.45$, range = 11–86, median = 26), "Performing for/working with the public" (MIR = 27.86, $SD = 9.34$, range = 11–86, median = 26), "Deal with external customers" (MIR = 28.56, $SD = 9.64$, range = 13–82, median = 27), "Frequency in conflict situations" (MIR = 28.39, $SD = 9.64$, range = 13–81, median = 27), and "Deal with angry/unpleasant people" (MIR = 28.56, $SD = 9.66$, range = 13–81, median = 27).[4] The importance of these characteristics for the job was assessed on a scale from 1 (*lowest*) to 5 (*highest*)

[3]More specifically, we first translated the O*NET SOC 2010 codes to 2000 Census codes using crosswalk tables provided by the Institute for Structural Research (Hardy, 2016). In this process, values were converted to other classifications and averaged along the way by classification codes. In a second step, we translated the 2000 Census codes to 1990 Census codes using the crosswalk table provided by the IPUMS Center for Data Integration, (2024), which we then matched to the MIDUS data. For example, the O*NET SOC code 29-1141.00 for the job "registered nurse" was first collapsed to the SOC 2010 code 291141. Next, this code was translated to the SOC 2000 code 211111. The SOC 2000 code was then translated to the 2000 census code 313. In a final step, the 2000 census code was translated to the 1990 census code 95, which was matched to the MIDUS dataset.

[4]Glomb et al. (2004) found an additional, sixth item ("Providing a service to others"), which is no longer in the O*NET database and could thus not be used for our study.

Table 1. Items of the Learning Goal Orientation Scale.

Item text	Original scale	Response scale	Item-scale correlation
1. For me, life has been a continuous process of learning, changing, and growth.	Personal growth	1–7	0.57
2. I am not interested in activities that will expand my horizon. (reverse-coded)			0.49
3. I often go on working on a problem long after others would have given up.	Achievement		0.55
4. I like to try difficult things.			0.63
5. I try to grow as a person as a result of the experience (stressful event).	Positive reinterpretation and growth	1–4	0.67
6. I learn something from the experience.			0.65
7. I find I usually learn something meaningful from a difficult situation.	Secondary control	1–4	0.61
8. I rarely give up on something I am doing, even when things get tough.	Primary control	1–4	0.62

Note. R = reverse coded.

and averaged to form one scale (α = 0.85). While EJDSs can also be studied as employees' subjective experience (Griffin & Clarke, 2011), we focus on EJDs as an occupational requirement (Bhave & Glomb, 2016; Glomb et al., 2004; Grandey et al., 2013; Reh et al., 2021), which is not conflated with employees' internal processes (e.g., their emotion regulation strategies, Hülsheger & Schewe, 2011) that occur in response to EJDs. This allows us to investigate how the work context (rather than individual differences) may set employees on different pathways in their sympathy over time. In contrast to self-report measures of EJDs, O*NET provides more objective information that also alleviates the problem of common-method bias.

Learning goal orientation (T1)

Since the MIDUS datasets do not contain an LGO scale but measure related constructs, we took several steps to create an LGO scale. In a first step, we created a list of characteristics of LGO based on existing scales of the construct (e.g., Van de Walle, 1997; see Supplementary material for details). In a second step, we selected all scales in MIDUS II that may relate to those characteristics, which resulted in a list of seven scales. From those scales, we selected 12 items that reflect the construct based on the definitions used in the literature. Those items form core aspects of a LGO, such as the enjoyment of challenge and learning even if this is difficult and one has to work hard, the goal to learn and develop skills, the choice of challenging environments and a perspective on failure or difficulty as an opportunity to learn and grow (Gong et al., 2013; Payne et al., 2007; VandeWalle, 2003). The items came from the subscales personal growth (Ryff, 1989), achievement (Patrick et al., 2002), primary and secondary control (Wrosch et al., 2000), as well as insight into past (Prenda & Lachman, 2001). Second, to make a final and even more informed decision on the items, we let 28 experts in IO-psychology read a description of a LGO in an online survey and then rate the extent to which each item represents the construct on a 5-point scale (1 = *not at all*, 5 = *very well*). Items were retained if (1) at least 75% of the experts rated them with a score of 3 or higher, and (2) the mean rating score was greater than 3, leading to a final set of eight items (Table 1). As these items were assessed on different response scales, we standardized them before averaging them to one measure. The resulting scale showed satisfactory reliability (α = 0.74). Third, to further test the content validity of the self-constructed LGO measure, we conducted a content validation study using procedures described by Colquitt et al., (2019) that is reported in the Supplementary material.[5]

Covariates (T1)

We included gender (1 = male, 2 = female) and age as covariates because of previous research showing gender as well as age differences in emotional experience (Kunzmann et al., 2013). We also included participants' average weekly working hours as they represent the *quantity* of EJDs that participants are exposed to (i.e., participants who work in the same job but only work part time might experience their job differently). To ensure that any effect of EJDs on changes in sympathy is due to the emotional nature of the demands and not due to other demands or some jobs just being more demanding than others, we included participants cognitive (α = 0.91), managing (α = 0.94), and physical demands (α = 0.96) as additional covariates. Measures for these also came from the O*NET and were based on the same factor analysis by Glomb et al. (2004) as for the EJDs measure.

Results

Table 2 shows means, standard deviations, and intercorrelations between all study variables.

Preliminary analyses

Before testing our hypotheses, we tested for measurement invariance across time for our measure of sympathy, which was assessed at T1 and T2 and specified as a latent factor (Allemand et al., 2007). Confirmatory factor analyses supported metric invariance as a model that constrained the factor loadings to be equal across time revealed good model fit, $\chi2$ = 12.57, *df* = 7, *p* = .08, CFI = 0.994, RMSEA = 0.028, SRMR = 0.019, TLI = 0.988, and, at the same time, did not differ significantly from a model in which factor loadings could vary across time, $\Delta\chi2$ = 0.702, Δdf = 2, *p* = ns. Further model comparisons

[5]Since LGO can be measured as a trait or a state and our dataset has a time lag of, on average, 9 years, we ran several analyses to test the stability of LGO. We first checked the correlation between LGO in MIDUS II (the measure in our model) and LGO in MIDUS III which resulted in a correlation of r = 0.61 (p < .001). In a second step, we calculated a LCS for LGO between MIDUS II and MIDUS III. The LCS of LGO was non-significant (estimate = –0.10; p = .29) suggesting that there was no systematic change in LGO between measurement points. Together, those results strengthened our confidence that our LGO measure captures a stable, dispositional construct, at least over the period that we study.

Table 2. Means, standard deviations, and intercorrelations of study variables.

	M	*SD*	1.	2.	3.	4.	5.	6.	7.	8.	9.
1. Gender	1.45	0.50									
2. Age at T1	48.97	8.40	–0.08*								
3. Weekly working hours	43.51	13.55	–0.31***	–0.10**							
4. Cognitive job demands	3.25	0.32	–0.16***	0.02	0.09*						
5. Physical job demands	2.00	0.61	–0.20***	–0.02	0.03	–0.29***					
6. Managing job demands	3.10	0.49	–0.12***	0.02	0.11**	0.64***	–0.11**				
7. Emotional job demands	3.21	0.49	0.21***	0.01	–0.03	0.20***	–0.14***	0.43***			
8. Learning goal orientation	0.00	0.61	–0.02	0.11**	0.02	0.10	–0.04	0.07*	0.07		
9. Sympathy T1	4.98	0.96	0.12**	0.16***	–0.03	–0.01	0.03	0.03	0.08*	0.17***	
10. Sympathy T2	4.98	0.87	0.12**	0.11**	–0.02	–0.05	0.04	–0.01	–0.01	0.19***	0.52***

Note: N = 831. Gender (1 = male, 2 = female). Learning Goal Orientation items were standardized.
*p < .05, **p < .01, and ***p < .001.

Table 3. Latent change score models predicting change in sympathy.

	Model 1			Model 2			Model 3		
	γ	*SE*	*p*	γ	*SE*	*p*	γ	*SE*	*p*
Intercept	1.849	0.243	.001	1.787	0.245	.001	1.923	0.250	.001
Gender	0.152	0.061	.013	0.185	0.063	.004	0.209	0.065	.001
Age	0.004	0.003	.262	0.004	0.003	.240	0.002	0.003	.520
Working hours	0.001	0.002	.987	0.001	0.002	.993	0.001	0.002	.796
Cognitive job demands	–0.135	0.117	.251	–0.158	0.118	.183	–0.182	0.121	.132
Physical job demands	0.041	0.048	.393	0.034	0.048	.484	0.054	0.049	.271
Managing job Demands	0.051	0.072	.482	0.121	0.080	.130	0.142	0.083	.086
Emotional job demands				–0.136	0.066	.039	–0.144	0.067	.033
Learning goal orientation							0.193	0.051	.001
EJD × LGO							0.183	0.090	.042

Note. N = 778. EJD = Emotional Job Demands. LGO = Learning Goal Orientation. Gender (1 = male, 2 = female).

suggested scalar invariance, as a model in which the intercepts were constrained to be equivalent across time points also revealed good model fit, $\chi2 = 62.83$, $df = 21$, $p < .001$, CFI = 0.995, RMSEA = 0.023, SRMR = 0.020, TLI = 0.992, and did not differ significantly from a model in which the intercepts were free to vary across time, $\Delta\chi2 = 1.325$, $\Delta df = 2$, p = ns.

Hypotheses testing

We specified latent change score (LCS) models in *MPlus* 8 (Muthén & Muthén, 1998–2022) to analyze mean-level changes in sympathy in the 10-year period between MIDUS II and MIDUS III. We modeled change in sympathy as latent change regression scores (McArdle, 2009) with higher values representing increases in sympathy over time.

Hypothesis 1 predicted that as employees grow older, their sympathy increases. To test this hypothesis, we analyzed the mean-level intraindividual change in sympathy. For Hypothesis 1 to be supported, the mean latent change should be positive and significant. Results of an LCS regression provided support for Hypothesis 1 as the mean-level change in sympathy was positive and significant, $M = 2.00$, $SE = 0.220$, $p < .001$, and the model fit the data well, $\chi2 = 13.243$, $df = 7$, $p = .066$, CFI = 0.994, RMSEA = 0.030, SRMR = 0.019. There was also significant variance in these intraindividual changes (Var = 0.290, $SE = 0.049$, $p < .001$) suggesting that there are individual differences in how sympathy changes.

Hypothesis 2 predicted that EJDs negatively affect change in sympathy so that employees with high EJDs experience less increases in sympathy than those employees with low EJDs. We fitted the same LCS model as before with EJDs and the covariates as predictors. Table 3 shows the results for a model with only the covariates as predictors (Model 1) and the model with EJDs as an additional predictor (Model 2). For Hypothesis 2 to be supported, the coefficient for EJDS should be negative and significant. In support of Hypothesis 2, EJDs had a negative effect on change in sympathy ($\gamma = –0.136$, $SE = 0.066$, $p < .05$).

Hypothesis 3 stated that an LGO positively relates to changes in sympathy. In other words, employees with a higher LGO will experience a stronger positive change in sympathy than those with a lower LGO. For Hypothesis 3 to be supported, the coefficient for LGO should be positive and significant. As Model 3 in Table 3 shows, LGO had a positive effect on change in sympathy, $\gamma = 0.193$, $SE = 0.051$, $p < .01$, supporting Hypothesis 3.

Hypothesis 4 finally predicted an interactive effect of EJDs X LGO on change in sympathy in the sense that a high LGO should buffer the negative effects of EJDs on sympathy changes. Thus, for Hypothesis 4 to be supported, the EJDs × LGO interaction term needs to be significant, and the simple slope for EJDs at low levels of LGO should be significantly

Figure 2. Interactive effect of emotional job demands and learning goal orientation (LGO) on mean-level change in sympathy.

more negative than the simple slope at high levels of LGO. Model 3 in Table 3 shows that the interaction coefficient for EJDs × LGO was indeed significant, $\gamma = 0.183$, $SE = 0.090$, $p < .05$. To further explore this interaction effect, we plotted the effect of EJDs on change in sympathy at high (+1 *SD*) and low (–1 *SD*) levels of LGO. Figure 2 shows the simple slopes. In support of Hypothesis 4, the effect of EJDs on change in sympathy was negative and significant ($b = –0.241$, $SE = 0.083$, $p = .004$) at low levels of LGO but was not significant at high levels of LGO ($b = –0.039$, $SE = 0.83$, $p = .639$). Thus, an LGO buffered the negative effects of EJDs on change in sympathy as only those with a low LGO experienced a negative effect of EJDs.[6]

Discussion

Drawing on the SAVI model (Charles, 2010), this study set out to test whether EJDs affect employees' changes in sympathy over time in a negative way, and whether an LGO, as an individual-level resource, can buffer these negative effects. Consistent with our hypotheses, we found that sympathy on average increases over the 9-year period of investigation, pointing to age-related strengths (Charles, 2010). EJDs had a negative effect on these changes and thus inhibited employees in increasing their sympathy over time. At the same time, we found that employees high in LGO showed a steeper increase in sympathy and LGO moderated the negative effect of EJDs on changes in sympathy. EJDs thus diminished increases in sympathy only for those employees with a low LGO. In the following, we discuss the implications of our findings for research on EJDs, goal orientation, and the interplay between the work context and adult development.

Theoretical implications

Our work contributes to research on emotional aging (Toomey & Rudolph, 2018; Wieck & Kunzmann, 2015). Whereas our findings are consistent with studies that established positive age trends for sympathy (Sze et al., 2012; Wieck et al., 2021), the effects of EJDs, LGO, and their interaction also show that age differences are highly dependent on the work context. In line with SAVI (Charles, 2010), the positive normative change in sympathy may be offset by EJDs which tap into employees' vulnerabilities as they grow older. At the same time, an LGO may boost the strengths of aging individuals at work and allow employees to make use of their life experience. Thereby, our study contributes to a better understanding of when and why older employees sometimes show better emotional functioning than their younger counterparts (Doerwald et al., 2016), underlining the value of lifespan theories to explain long-term dynamics at work (Zacher, 2015) but also highlighting that work is a crucial factor to consider when studying adult development (Scheibe & Kooij, 2024).

Our research further contributes to the large body of literature that investigates when, why, and for whom EJDs are good or bad in terms of emotional consequences and workplace behavior (Grandey et al., 2013; Hülsheger & Schewe, 2011; Morris & Feldman, 1996; Rafaeli & Sutton, 1987; Reh et al., 2021). Our study confirms and extends earlier work on the negative emotional consequences of EJDs for employees (Abraham, 1998; Hülsheger & Schewe, 2011; Zapf et al., 1999, 2001). At the same time, it paints a different picture than other studies using EJDs at the occupational level, which argued that EJDs may have positive interpersonal consequences (Bhave & Glomb, 2016)

[6]Since participants could have changed their jobs between MIDUS II and MIDUS III, we checked whether EJDs remained stable between the two measurement points. After a similar matching procedure as for the EJDs in MIDUS II, we first checked the correlation between EJDs at our first and second measurement point which was $r = 0.61$ ($p < .001$), suggesting a high degree of stability. In a second step, we calculated a LCS for EJDs between MIDUS II and MIDUS III. The LCS was significant and suggested a small increase in EJDs over the study period (estimate = 1.11; $p < .001$). Therefore, we ran an additional robustness check with MIDUS III EJDs as a covariate in our full model. The coefficient for MIDUS III EJDs was nonsignificant and, in addition, none of the other effects in the model changed.

because they entail social interactions that feed employees' need for affiliation (Humphrey et al., 2008). Here, it is important to keep in mind that the effects of EJDs can be multidirectional and depend on the exact outcome studied (e.g., Reh et al., 2021; Wieck et al., 2021). While the short-term effects may be positive, over a longer time-span EJDs may make employees less able or willing to engage with others' experiences and feel concern and warmth for them, possibly because EJDs deplete aging employees' self-regulatory resources.

With regards to effective organizational functioning, the results of our study suggest that EJDs may be harmful beyond negative effects on employee well-being (Pugliesi, 1999) since they also lead to lower sympathy, which by extension, may undermine effective interpersonal functioning in organizations. Sympathy is an important predictor of prosocial behavior (Eisenberg & Fabes, 1990; van Kleef & Lelieveld, 2022). Thus, lowered sympathy at work entails the social costs of less prosocial behavior. This might have detrimental consequences in professions that require sympathy such as caring jobs (Park et al., 2019). Not only do employees meet their job demands less well which may result in lower patient or client satisfaction, but they may also provide (and subsequently receive) less support as one form of prosocial behavior between coworkers. Over time, this might initiate a vicious cycle and might explain why EJDs lead to lower well-being in the long run. Although the idea of a vicious cycle still awaits empirical investigation, it is in line with findings from Reh et al. (2021) who found a quadratic effect of EJDs at the occupational level in a German sample on trajectories of positive emotions and satisfaction where the downward slope is accelerated at high and very high levels of EJDS, underlining the negative long-term effects of EJDS on employees.

At the same time and going beyond Reh et al. (2021), our research highlights an important protective factor in the relationship between EJDs and employees' emotional experience: Individuals' LGO buffers the negative effects of EJDs on changes in sympathy. Pairing emotionally demanding jobs with learning goals might illuminate an interesting way to reduce the negative impact of EJDs. While to the best of our knowledge, no study has tested the influence of LGO on the effects of EJDs, a study with a sample of flight attendants, a profession with high EJDs, suggests that self-efficacy positively influences how employees dealt with EJDs with regards to emotional dissonance and work engagement (Heuven et al., 2006). Self-efficacy, although conceptually different, shares some parallels with an LGO in the way individuals high in each one of them approach tasks. Individuals high in self-efficacy believe that they can successfully perform novel or difficult tasks (Bandura, 1986), which matches with the curiosity toward novelty and the attitude toward potential failure that is part of an LGO. This study points in a similar direction as our results, namely that learning-oriented employees may interpret high EJDs as an opportunity to improve their emotion regulation skills rather than as threats. And because they are less sensitive to the potentially self-threatening nature of these encounters, they indeed show more sympathy over time. In this context, it is interesting to note that some aspects of LGO tap into other well-being enhancing concepts such as resilience or coping skills, which also contribute to buffer the harmful effects of EJDs (and align with SAVI).

For research on goal orientations, our research also has implications by investigating the effect of LGO on emotional experience over time. So far, goal orientation research mostly focused on cognitive or physical performance (Payne et al., 2007; Van Yperen et al., 2014) and its trajectories over time (Yeo & Smillie, 2008), yet, contemporary jobs increasingly pose emotional demands to workers (Glomb et al., 2004). Results from our study point to the beneficial effects of an LGO in the emotional realm. For future research, it would be interesting to explore the role of the other two goal orientations, performance prove and performance avoidance orientation, in employees' reactions to emotionally demanding jobs. Both performance orientations have in common that individuals are concerned with their performance relative to others (Vandewalle, 1997). This could motivate them to engage more with emotionally demanding episodes at work, yet, it also raises the question whether employees then show genuine sympathy that clients perceive as authentic or whether their main goal is to make a good impression in comparison to their coworkers.

On a broader level, our work contributes to the question how job demands effects unfold in the long run (Gonzalez-Mulé & Cockburn, 2017). Our study suggests that the effects are not only context-dependent, but also depend on the type of demand that is studied. For instance, research on cognitive job demands has shown that people with higher cognitive demands enjoy better cognitive functioning when they age (Fisher et al., 2014). However, when it comes to EJDs, we find the opposite: Employees show less sympathy over time in jobs that pose respective demands. Thus, when investigating the long-term effects of job demands, it is key to look at their nature and not generalize mechanisms across different demands.

In the context of job demands more generally, an interesting side-finding of our study was that participants' EJDs increased slightly over the 9-year period that we studied. One explanation could be that people over time gain greater responsibility in their job and move into leadership positions. Those often come with more interpersonal responsibility and emotional demands. Investigating trajectories of job demands in relation to individual and work outcomes could be an interesting area for future research.

Limitations and future research

Despite several strengths (almost a decade of longitudinal data, objective measure for EJDs, large sample size), this study has several limitations. First, our measure of EJDs at the occupational level does not capture any variability at the organizational or individual level. Whereas the former reduces common-method bias (Podsakoff et al., 2003), the question arises how organizational characteristics or subjective perceptions color the relationship between EJDs and sympathy. Previous research though found positive relationships between the O*NET and self-ratings (McGonagle et al., 2015) which gives us confidence in our results. To complement and extend our findings, future research could triangulate O*NET data with subjectively rated EJDs and investigate the moderating effect of context. For instance, building on our finding that an LGO at the individual level (i.e., as an individual difference between employees) buffers the negative effects of EJDs on sympathy, future research could test whether learning goals at the organizational level in the form

of a mastery climate (Nerstad et al., 2013) would provide an environment for employees to strive rather than be depleted in their emotionally demanding jobs.

In this context, another interesting area for future research is the emotion regulation strategies that employees use and how they interact with EJDs to influence changes in sympathy. Meta-analytic evidence points to generally undesirable effects of surface acting, where employees modify their facial expressions, and neutral or more desirable effects of deep acting, where employees modify their inner feelings, on indicators of well-being and performance (Hülsheger & Schewe, 2011). Yet, we know little so far how those strategies unfold in the long run and whether deep acting may also buffer negative effects of EJDs on changes in sympathy. Relatedly and in addition to LGO, other personality variables such as agreeableness could be investigated to see whether they might buffer EJDs in situations that are emotionally demanding because of conflicts or rude behaviors. Agreeableness might enable employees to still experience sympathy towards such customers.

Since we used publicly available data, the choice of measures for our theoretical model was limited and hence, we had to work with imperfect measures. Therefore, we took several steps to ensure that we arrive at the best possible measures that we can. Specifically, for the self-composed LGO measure, this involved an initial item selection based on construct definition, final item selection based on expert ratings, and a content validation study. To reduce concerns about our sympathy measure, we tested the convergent validity with another validated multi-item measure. Results of our content validation studies (reported in the Supplementary material) point to acceptable rather than optimal measures for LGO and sympathy, which encourages future longitudinal research using established measures. It is notable that other recent studies that followed Colquitt et al. (2019) approach found stronger content validity for their scales (Brown et al., 2022; Davidsson et al., 2021; e.g., Harold et al., 2022). However, those studies used self-constructed scales rather than existing data and they used expert ratings rather than naïve judges as Colquitt et al. (2019) recommend to evaluate content validity. Therefore, it remains an open question for future research how to evaluate content validity in archival data.

Another limitation and avenue for future research is that our outcome variable sympathy captures only one facet of the broader construct of affective empathy (Davis, 2018; Wieck & Kunzmann, 2015). The nature of our data did not allow us to test the effects of EJDs on multiple facets of empathy or emotional skills more broadly. Previous research found EJDs to have multidirectional effects on different facets of empathy. For instance, Wieck et al. (2021) found a negative cross-sectional relationship between age and emotional congruence (a facet of affective empathy that involves sharing the same emotions as the other person) at high levels of EJDs. Thus, future studies could ideally analyze more nuanced patterns how EJDs affect different aspects of employees' emotional functioning to understand which facets are at risk in emotionally demanding jobs via a health impairment process, and which facets eventually benefit through these demands via a learning or motivational process. Drawing on research showing that cognitive job demands predict higher cognitive functioning in later life (Fisher et al., 2014), the question arises whether EJDs potentially have a positive effect on the cognitive facets of empathy such as empathic accuracy (Wieck et al., 2021).

Relatedly, this study could not test the assumed underlying processes outlined by SAVI, learning from life experience and physiological vulnerabilities. Since the MIDUS dataset was limited to two timepoints only, future research could investigate the underlying mechanisms more closely with more data points. Additional data points may also help us better understand the meaning of lower sympathy in high EJD jobs by investigating its link with subsequent global occupational health and well-being outcomes. We have interpreted the suppressor effect of EJDs on sympathy over time as a negative outcome. However, scholars have pointed at the possibility that emotional distancing can be an adaptive response to high EJDs, which protects these workers from empathic distress and burnout (Kleineidam & Fischbach, 2023). Accordingly, lowered sympathy may protect this group of workers from personal resource loss and ill-being, which may counteract at least some of the interpersonal costs of lower sympathy. Testing this idea would require more than two data points in order to link change in sympathy with subsequent change in broader occupational well-being and relationship indicators. Alternatively, or in addition, future research could employ qualitative designs to further investigate the mechanisms how employees, and in particular those with a high LGO, deal with EJDs. As we alluded to earlier in our theorizing, employees with high LGO could be able to build emotion regulation skills that allow them to experience sympathy while at the same time avoid harming their own emotional well-being. Such qualitative studies could, for instance, explore how a balance between fulfilling one's own needs and sympathizing towards those of others can be achieved in jobs with high EJDs.

Some other limitations arose out of the fact that we used two secondary data sources. For instance, data derived from the O*NET was not collected at the same time points as the MIDUS data, and was, hence, more recent. While we cannot rule out that some occupational characteristics changed slightly over this time period (see Wegman et al., 2018), the degree of EJDs between jobs (i.e., their comparative nature) should have stayed similar over time (e.g., social jobs would still rate higher in EJDs than, for example, IT jobs). The stability of job demands over time would be an interesting question for future research to investigate.

Practical implications

Our study also has some practical implications for managers in organizations. First, our results point out that paradoxically, employees in those professions who need sympathy the most because of sensitivity demands (Scheibe et al., 2015) are at risk of losing it as a consequence of their job. However, there seems to be hope as employees with a high LGO do not experience these decreases. Organizations could make use of this and promote learning goals and foster an organizational climate that supports learning-oriented employees (Nerstad et al., 2013). Thereby, the negative effects of EJDs on employees' long-term sympathy can potentially be buffered, which is helpful in jobs with high sensitivity demands.

Moreover, based on the negative effects of EJDs on sympathy that occur as a result of increased physiological vulnerabilities across the working lifespan, HR managers

would be well-advised to ensure that workers have enough opportunities to recover (El Khawli et al., 2024; Wrzus et al., 2014). Flexible working patterns or task rotation (Campion et al., 1994) could be fruitful ways how employees can alternate between highly emotionally demanding episodes and times of recovery or at least work episodes that do not further deplete their emotional resources (Xin et al., 2024).

Conclusion

Emotional job demands are omnipresent in many jobs that involve interpersonal contact and interactions with others (Diefendorff et al., 2006). According to our study, these EJDs put employees at risk of losing an important component of their emotional functioning that they need to successfully meet their job demands and maintain positive relationships with coworkers, namely their sympathy. At the same time, there seems to be light at the end of the tunnel as an LGO may buffer the social costs of EJDs. When studying the effects of EJDs, it is thus important to pay close attention to the context and how work features and individual characteristics interact in shaping emotional development in adulthood.

Supplementary material

Supplementary material can be found at: http://www.oxfordjournals.org/our_journals/workar/

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Conflicts of interest

None declared.

Data availability statement

The data underlying this article are available via the MIDUS portal, at https://midus.colectica.org/Account/Login?returnUrl=%2F and the O*NET Resource Center at https://www.onetcenter.org/database.html.

Data transparency appendix

This is the first use of the database (MIDUS) by all of this manuscript's authors. The results of the studies reported in this manuscript will be presented at the Academy of Management Annual Meeting 2021. Further use of the data for the specific set of variables presented in this study is not planned.

The MIDUS data can be requested via https://www.midus.wisc.edu. An overview of the research projects published using the MIDUS data can be found on the website of the Midlife in the United States Survey website under the following link: http://midus.wisc.edu/findings.

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