Tracking the Process of Resilience: How Emotional Stability and Experience Influence Exhaustion and Commitment Trajectories

Patrick J. Flynn[1] 📀, **Paul D. Bliese**[2],
M. Audrey Korsgaard[2], **and**
Cormac Cannon[2]

Abstract

This study responds to calls to conceptualize resilience as a dynamic process by examining individual trajectories of emotional exhaustion and affective commitment over time in the face of ongoing role demands. In contrast to research conceptualizing resilience as a dispositional trait, we conceptualize resilience in terms of patterns of between-individual variation in response trajectories (dynamic resilience). In a longitudinal study spanning three months and 12 observational periods, we show that individuals high in emotional stability had more static affective commitment trajectories and that organizational newcomers had less pronounced emotional exhaustion trajectories in response to ongoing demands. Both the patterns shown for those with high emotional stability and newcomers are indicative of greater dynamic resilience. Furthermore, we found that affective commitment trajectories

[1]North Carolina State University, Raleigh, NC, USA
[2]University of South Carolina, Columbia, SC, USA

Corresponding Author:
Patrick J. Flynn, North Carolina State University, 2801 Founders Drive, Raleigh, NC 27695, USA.
Email: pflynn@ncsu.edu

were significant predictors of actual retention through the mediating mechanism of intent to remain. We discuss how our approach offers opportunities to study resilience in dynamic settings.

Keywords

Employee resilience has important implications for job satisfaction, well-being, commitment, performance, retention intentions, and job search behavior (Linnenluecke, 2017). Resilience is defined as the process of *positive adaptation* to adversity (Duchek, 2020; Fisher, Ragsdale, & Fisher, 2019; Hartmann, Weiss, Newman, & Hoegl, 2020; Luthar, Cicchetti, & Becker, 2000; Stoverink, Kirkman, Mistry, & Rosen, 2020) and often integrates the idea of "bouncing back" (Fisher et al., 2019; Stoverink et al., 2020; Vanhove, Herian, Perez, Harms, & Lester, 2016). When conceptualized as a dynamic process, resilience is inferred from patterns of responses to adverse circumstances or events. For example, dynamic resilience may be reflected in the time-trajectory of grief following the death of a significant other (Bonanno et al., 2002) or the recovery pattern of performance scores when teams face setbacks (Adler, Bliese, Barsade, & Snowden, 2021). In the dynamic view, resilience may be captured by a multilevel model of within-individual response trajectories over time. As we show, these response trajectories can be predicted from person-level characteristics such as emotional stability and linked to outcomes such as retention.

Research on the role of resilience in organizational behavior often acknowledges that resilience is a dynamic process. Nevertheless, as summarized in a recent review of resilience in the workplace (Hartmann et al., 2020), resilience is frequently operationalized as a dispositional trait. What we refer to as "dispositional" resilience research tends to be static and link ratings of resilience to outcomes of interest across one or two time points with little or no emphasis on dynamic processes. One benefit with using the dispositional trait approach is being able to rely on traditional forms of measurement validation to assess and differentiate individuals with respect to self-ratings of perceived resilience. The dispositional approach, however, can be problematic if measures of trait resilience and relevant outcomes are assessed concurrently or in close temporal proximity. For instance, individuals who are currently experiencing few or no negative effects may also conclude that they are

therefore "resilient," raising questions about how dispositional resilience is causally related to key outcomes.

More importantly, if resilience is a process then it cannot be fully captured using static approaches (e.g., Roe, 2008). To demonstrate process, it is necessary to examine change over time. An alternative to the disposition-based approach is to examine trajectories of responses on relevant outcomes over time (e.g., patterns of depression after adversity) and define patterns indicative of a resilient response (e.g., low, stable rates of depression after an adverse event). In this "dynamic" resilience approach, resilience and adaptation "must be inferred from indirect evidence" (Lucas, 2007, p. 75) rather than rely on direct assessments of disposition-rated resilience.

Workplace resilience research—regardless of whether it is conceptualized as dispositional or dynamic—tends to focus on predicting organizationally relevant behaviors and attitudes such as performance, commitment, turnover intent, and/or aspects of psychological well-being such as emotional exhaustion (Adler, et al., 2021; Avey, Luthans, & Jensen, 2009; Hudgins, 2016; Hartmann et al., 2020; Meng et al., 2019). In dispositional resilience research, inferences are often drawn by examining relationships between self-assessments of trait resilience and relevant outcomes using models that do not explicitly consider change. In contrast, dynamic resilience research involves identifying systematic differences in the patterns or trajectories of outcomes such as commitment and emotional exhaustion over time (Bonanno, 2004). The dynamic approach fundamentally conceptualizes resilience based on patterns of outcomes and opens the door to understanding trait-like differences that explain variation in these patterns. For instance, Adler, et al. (2021) examined tank crew performance over time. The authors argued that the performance rebound from a set-back represented a form of dynamic resilience and found that a shared emotional culture of optimism (a trait-like characteristic of the team) predicted this form of dynamic resilience. Despite the conceptual appeal of integrating theoretical definitions of resilience which tend to be dynamic with longitudinal designs that allow for dynamic inferences, dynamic resilience research is rare in workplace studies and hence the conceptual and empirical implications are not fully developed.

One defining feature of research on dynamic resilience is that outcomes are frequently studied in response to a specific adversity (Bonanno, 2004; Luthar et al., 2000). In the psychology literature, adversity routinely takes the form of an acute, potentially traumatic event such as the death of a loved one or a heart attack (Galatzer-Levy & Bonanno, 2014). While intense and/or acute events are certainly relevant at work (e.g., furloughs; Halbesleben, Wheeler, & Paustian-Underdahl, 2013), we believe more research needs to be directed toward understanding dynamic resilience in response to chronic moderate

demands such as common workplace stressors (Tubbert, 2016). Chronic moderate stressors in the workplace, such as work overload, may not be as intense as potentially traumatic events, but exact a toll over time by consuming the psychological resources individuals use to cope with demands (Halbesleben, Neveu, Paustian-Underdahl, & Westman, 2014). Viewed as a trajectory over time, a lack of dynamic resilience is manifested as a declining slope in positive outcomes such as commitment and an increasing slope in negative outcomes such as emotional exhaustion. In contrast, dynamic resilience is manifested in relatively stable or flat outcome trajectories—at high levels for favorable outcomes and at low levels for unfavorable outcomes.

Studying dynamic resilience offers precision in terms of identifying specific patterns associated with positive adaptation in an organizational context (Bliese, Adler, & Flynn, 2017). Scholars who conceptualize resilience as "bouncing back" from adversity view resilience as an immediate negative response followed by rapid recovery (Fisher et al., 2019; Stoverink et al., 2020; Vanhove et al., 2016). Others view resilience as a resource that enables individuals to flexibly adapt to shifting demands without an immediate negative response (Shin, Taylor, & Seo, 2012). In line with this latter conceptualization, Bonanno (2004) posits that a resilience pattern—what we refer to as dynamic resilience—is manifested by maintaining a relatively stable level of functioning even after the immediate exposure to the adversity. Importantly, in cases involving chronic moderate demands, the patterns indicative of resilience are less clearly defined, in part because the dynamic approach to resilience in the context of chronic demands has received less theoretical attention.

In this article, we review research examining resilience as a dynamic response to acute events and build on this work to consider resilience as a pattern of responses to chronic demands. We then empirically illustrate how resilient patterns can be identified, how person-level variation of these patterns can be modeled to identify characteristics of resilient individuals, and how these patterns predict behavioral intentions and behaviors. Our example involves response trajectories from a large sample of students in a collegiate marching band over 12 data collection points spanning 3 months. We demonstrate the resilience process in patterns of change in emotional exhaustion and affective commitment over time and show the practical relevance of focusing on response patterns by examining how trajectories relate to intention to remain and actual retention. In so doing, we answer calls to conceptualize and examine resilience as a dynamic process and extend theory on resilience to organizational contexts involving chronic moderate demands. Finally, our approach, which conceptualizes time as nested within individuals (Korsgaard, Kautz, Bliese, Samson, & Kostyszyn, 2018), enables us to

examine both within- and between-individual features of resilience, offering insights into the antecedents and consequences of dynamic resilience.

Resilience and Acute Exposure

As noted, defining resilience as a process implies that resilience is demonstrated in the trajectory of responses to adversity. Research using latent growth mixture modeling or LGMM, a technique that forms clusters of individual trajectories, Bonanno (2004) has identified four patterns of response to adversity with respect to outcomes such as post-traumatic stress disorder (PTSD) symptoms and depression. First, individuals may display a *chronic* pattern illustrated by an immediate and persistent elevation in negative responses. Second, individuals may display a *delayed* response where negative responses are initially low and grow over time. Third, individuals may display a *recovery* response where an initial elevated negative response is followed by recovery over time to baseline levels. The fourth trajectory, identified as *resilience*, involves a muted (if any) immediate response to adversity followed by a relatively stable pattern of low levels of negative responses over time. In other words, the resilience trajectory is characterized by sustained and low levels of negative health outcomes despite experiencing adversity.

These four patterns have been identified when examining response trajectories on variables such as anxiety, depression, and PTSD in reaction to acute events such as death of a loved one, terrorist acts, and health events (Galatzer-Levy, Huang, and Bonanno 2018). A key finding is that the resilience pattern, relative to the other three response patterns, is the most prevalent and is consistently associated with more favorable outcomes. For example, in a study of heart attack survivors, individuals who displayed the resilient pattern of low, stable depression had a lower risk of mortality than individuals who displayed a delayed pattern of depression (Galatzer-Levy & Bonanno, 2014). It is worth highlighting that from a dynamic resilience paradigm, typical outcomes such as depression or PTSD symptoms are used as an intermediate step to infer resilience patterns. The patterns are then linked to distal outcomes such as mortality.

Galatzer-Levy et al.'s (2018) review of 57 studies found that 66% of participants were identified as being in the resilient cluster despite exposure to a range of extremely challenging and potentially traumatic events. Similar empirical insights into the patterns and prevalence rates in responses to chronic moderate demands are lacking; nonetheless, in line with Galatzer-Levy and colleagues' findings, we define dynamic resilience as a stable and high level of functioning in the face of adversity. Specifically, as noted previously, we expect that dynamic resilience in response to chronic moderate

demands will manifest in stable and low patterns for negative outcomes and stable and high patterns for positive outcomes.

While research on intense, acute stressors provides a framework for understanding dynamic resilience in a chronic setting, we fully anticipate that employee responses to chronic, moderate stressors are unlikely to be as pronounced and differentiated as they are in acute events. At the same time, however, we believe employee exposure to chronic moderate demands is prevalent in work settings. Thus, we examine workplace resilience in response to chronic moderate demands through the lens of dynamic resilience.

Resilience and Chronic Moderate Demands

Chronic moderate demands in the workplace are moderately aversive stimuli in the work context that are enduring or frequently occurring. Examples include factors such as role conflict, role ambiguity, and overload. Work stress literature suggests most of the adverse circumstances faced in occupational settings are likely to be chronic and relatively moderate rather than acute (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001; Schaufeli, Bakker, & Van Rhenen, 2009). Decades of research have linked these chronic, relatively moderate stressors to organizationally relevant consequences such as performance, job satisfaction, and turnover intentions (e.g., Bliese, Edwards, & Sonnentag, 2017).

Demands that are chronic and moderate are likely to impact the individual differently than those that are acute and/or intense. In contrast to the immediate and strong impact of acute, intense demands, moderate demands have an insidious and gradual impact. Work stress theories (Hobfoll, 1989; McEwen, 1998) suggest individuals cope with stress by utilizing various psychological resources, but these resources can be diminished or depleted over time. In early stages of exposure to moderate demands, individuals may effectively cope with the stressors, manifesting little or no adverse response. But over time, as psychological resources diminish, individuals are likely to be less effective in coping, resulting in increasingly negative responses. In short, theory suggests that the impact of chronic moderate stressors is gradual and cumulative, and failure to mitigate such effects can be deleterious to employee well-being, organizational attitudes, and work behaviors (Viswesvaran, Sanchez, & Fisher, 1999).

As detailed in the methods section, we had access to an organizational context in which individuals experienced chronic demands such as role overload—although of course no two individuals experienced the exact same circumstances, nor would they have perceived the same shared events identically. To investigate dynamic resilience in this context, we tracked two

organizationally relevant responses over time: emotional exhaustion and affective commitment. We infer dynamic resilience in individuals from their unique trajectories of emotional exhaustion and affective commitment over time.

Emotional exhaustion and affective commitment are two complementary outcomes from which to infer dynamic resilience. Emotional exhaustion refers to individuals' feelings of over-extension, negative affect, lack of energy, and depletion of emotional resources (Dunford, Shipp, Boss, Angermeier, & Boss, 2012; Maslach & Jackson, 1984). Emotional exhaustion is a predictor of outcomes such as job satisfaction (Alarcon, 2011), performance, and turnover (Wright & Cropanzano, 1998), and it stems from ongoing exposure to stressors (Alarcon, 2011; Halbesleben, 2006; Lee & Ashforth, 1996). Particularly important in our context is research showing that emotional exhaustion changes over time. For instance, emotional exhaustion has been shown to be impacted by work furloughs (Halbesleben et al., 2013) and job transitions (Dunford et al., 2012) suggesting that emotional exhaustion is a relevant and potentially sensitive indicator of dynamic resilience.

Affective commitment is an affect-based organizational attitude that predicts outcomes such as performance, citizenship, and turnover (Bentein, Vandenberghe, Vandenberg, & Stinglhamber, 2005; Mathieu & Zajac, 1990; Meyer, Stanley, Herscovitch, & Topolnytsky, 2002). Relational forms of attachment to organizations, such as affective commitment, are also sensitive to change based on the external environment and individuals' experiences in the organization (Bentein et al., 2005; Lance, Vandenberg, & Self, 2000; Morrison & Robinson, 1997; Rosen, Chang, Johnson, & Levy, 2009). For example, Bentein et al. (2005) found that, on average, individuals' affective commitment declined in a negative linear trajectory over time. In another example, Vandenberghe, Bentein, and Panaccio (2017) demonstrated that, on average, individuals' affective commitment, both to the supervisor and the organization, showed a negative linear trajectory over time. While these studies did not examine affective commitment from the lens of resilience, they demonstrate that on average affective commitment appears to decline over time, indicating lack of dynamic resilience. Therefore, identifying conditions under which individuals' affective commitment does and does not decline offers insights to understanding dynamic resilience.

In line with work stress theories (Hobfoll, 1989; McEwen, 1998), we propose that the trajectories of emotional exhaustion and affective commitment will, on average, exhibit a gradual worsening in a context where individuals are exposed to chronic, moderate stressors. That is, emotional exhaustion will gradually increase over time and affective commitment will gradually decrease as the length of exposure to moderate demands increases. Therefore, we propose:

Hypothesis 1: In the context of chronic moderate demands, there is an overall linear trend such that (a) emotional exhaustion will increase over time and (b) affective commitment will decrease over time.

Beyond this overall trend, we expect trajectories of emotional exhaustion and affective commitment to vary between individuals. That is, we do *not* expect individuals to show uniformity with respect to overall trajectories (Bonanno, 2004; Galatzer-Levy et al., 2018) but, rather, exhibit patterns indicative of varying levels of dynamic resilience. Presumably, some individuals will exhibit steeper increases in emotional exhaustion and steeper declines in affective commitment whereas others will display relatively stable patterns of low emotional exhaustion and high affective commitment. Systematic trajectory variation between individuals provides the opportunity to explore person-level predictors of more or less dynamic resilience. We formally state this requirement as a hypothesis:

Hypothesis 2: In the context of chronic moderate demands, there is significant variation between individuals' trajectories of (a) emotional exhaustion and (b) affective commitment over time.

Predicting Resilience Patterns

A key goal in dynamic resilience research is to identify factors that predict differential trajectories. A variety of contextual and individual difference factors have been linked to resilience in response to acute stressors (Bonanno, 2004). As noted, little is known about factors distinguishing more or less dynamic resilience in response to chronic demands. One exception is a study of response patterns associated with military pre-deployment training (Beehr, Ragsdale, & Kochert, 2015). While this training was intense, it was also prolonged (3 months) and did not involve exposure to an acute and potentially traumatic event.

Beehr et al. (2015) observed an overall pattern of elevated initial negative responses (e.g., high PTSD symptoms, depression, and physical health symptoms) followed by recovery over time. While the trajectories of PTSD symptoms, depression, and physical health were not characterized in terms of resilience, their trends are consistent with what Bonanno (2004) refers to as a *recovery* response rather than a relatively low and stable response trajectory characteristic of dynamic resilience. Beehr et al. (2015) likely observed the recovery response to the chronic stressors of training because the study examined National Guard soldiers who were apt to have experienced a fair amount of life disruption at the onset of the 3 months of training away from

home, and hence reported elevated strain at the initial time point. In contrast, we expect chronic moderate demands to produce an overall pattern of gradually worsening response in our context because there is little reason to expect elevated strain at the initial time period. Beehr et al. (2015) utilized a multilevel analytic framework where between-person covariates at level 2 were used to predict variation of within-person outcome trajectories at level 1 through moderation effects. We apply a similar approach examining the role of emotional stability and experience in dynamic resilience.

Emotional Stability

One of the five broad personality dimensions of the Five Factor Model, emotional stability refers to the tendency to be calm, even-tempered, self-confident, and secure (Barrick & Mount, 1991). In a study of responses to an acute severe event (death of a loved one), individuals high in emotional stability were more likely to exhibit a resilient trajectory—relatively low, stable levels of depression—than those low in emotional stability (Galatzer-Levy & Bonanno, 2012). Beehr et al. (2015) likewise found that individuals higher in emotional stability exhibited a resilient pattern—relatively low and stable post-traumatic stress symptoms—over the course of the intense pre-deployment training. Interestingly, emotional stability was not associated with a resilient pattern for either depression or physical strain.

Overall, theory supports the idea that emotional stability is likely to mitigate the impact of chronic stressors (Bowling, Beehr, Wagner, & Libkuman, 2005; Diener, Lucas, & Scollon, 2006), particularly on emotional exhaustion and affective commitment. Individuals with high emotional stability (low neuroticism) are presumably better able to make sense of the environment through task-focused coping (Boyes & French, 2010), acting on their environment to reduce the impact of negative stimuli, and exhibiting greater career resilience—resistance to career disruption in suboptimal environments (Lyons, Schweitzer, & Ng, 2015; Mishra & McDonald, 2017). Further, individuals with high emotional stability tend to be more future-oriented and less focused on past experiences (Shipp, Edwards, & Lambert, 2009), suggesting that they are less impacted in the present by past experiences.

Theory suggests that emotional stability impacts the cyclical process of resilience (Fisher et al., 2019; Duchek, 2020). Individuals high in emotional stability exhibit less variance in their day-to-day affect, cognition, and behavior. Given that their emotions do not vary widely, individuals high in emotional stability are less likely to view day-to-day stressors as emotionally significant or threatening while individuals low in emotional stability are more likely to be threatened by the same stressors. Individuals low in emotional

stability are less likely to engage in the cognitions and behaviors underlying the resilience process (Boyes & French, 2010), undermining their ability to recover from or preserve the resources needed to cope with ongoing moderate demands. Over time and exposure to chronic demands, the reduction of psychological and emotional resources and the inability to "bounce back" from relatively minor events is likely to lead to emotional exhaustion (Hobfoll, 1989). Therefore, we expect that emotional exhaustion will increase more over time (positive trajectory) for individuals low in emotional stability relative to those high in emotional stability. In contrast, we expect individuals high in emotional stability to exhibit a relatively stable (and low) trajectory of emotional exhaustion representing greater patterns of resilience. That is, emotional exhaustion trajectories for individuals high in emotional stability are likely to illustrate resilience.

> Hypothesis 3a: In the context of chronic moderate demands, emotional exhaustion will increase more for individuals with low emotional stability than individuals with high emotional stability.

Similarly, we expect that persons low in emotional stability are likely to have more pronounced adverse reactions to chronic demands leading to a cumulative erosion of affective commitment. As detailed in our arguments for Hypothesis 1, we expect that, on average, affective commitment will decline in response to chronic moderate demands (Bentein et al., 2005; Vandenberghe et al., 2017); however, we also expect some individuals to maintain stable (and high) levels of affective commitment as a function of emotionally stability.

> Hypothesis 3b: In the context of chronic moderate demands, affective commitment will decrease more for individuals with low emotional stability than individuals with high emotional stability.

Prior Experience

Experience shapes employees' knowledge, skills, attitudes, beliefs, and behaviors (Deadrick, Bennett, & Russell, 1997; Tesluk & Jacobs, 1998). Furthermore, experience in the form of organizational tenure has been linked to emotional exhaustion and affective commitment (Alarcon, 2011; Alarcon, Eschleman, & Bowling, 2009; Meyer et al., 2002). The relationship between experience in the form of prior exposure and patterns of resilience is not altogether clear. On one hand, theory suggests that having experience in a specific context gives individuals the opportunity to develop resilience

skills, increase their task-related self-efficacy, and help buffer them from stressors such as work overload (e.g., Dienstbier, 1989; Jex & Bliese, 1999; Meichenbaum, 1985). The evidence, however, is mixed. In support of the benefit of prior experience, research suggests that married couples who were exposed to earlier adversity coped more effectively with an adverse event later in their marriage (Neff & Broady, 2011). Similarly, Beehr et al. (2015) found that those with prior experience showed lower overall rates of post-traumatic stress symptoms and flatter trajectories than those without prior experience in the context of pre-deployment training. Finally, Seery, Leo, Lupien, Kondrak, and Almonte (2013) reported experimental evidence for a curvilinear effect where a moderate number of adverse life experiences generally mutes reactions to a threatening stimulus.

On the other hand, prior exposure to a stressor may deplete psychological resources needed to face future demands (Hobfoll, 1989) particularly when those demands are chronic. For instance, while a moderate amount of life adversity can be beneficial, extremely high amounts appear to be more problematic than no life adversity (Seery et al., 2013). In another example, Bliese, Thomas, McGurk, McBride, and Castro (2011) found that prior combat exposure conferred no benefit for reports of mental health problems when soldiers were deployed to a combat zone. Indeed, soldiers with prior combat exposure reported elevated mental health problems relative to first-time deployers, which is congruent with the idea of resource depletion. Likewise, research on the impact of vacation on burnout among clerical workers indicates that they rapidly returned to prior levels of burnout once they returned to work (Westman & Eden, 1997). Thus, previously exposed individuals may have heightened sensitivity due to previously experienced demands that threaten and diminish their psychological and emotional resources. Newcomers, on the other hand, have yet to accrue the cumulative effect of day-to-day stressors that heighten sensitivity, thereby limiting feelings of emotional exhaustion during the early months of their tenure. Building on conservation of resources theory (Hobfoll, 1989), we propose that prior exposure, in the form of experience, will undermine resilience in the context of chronic moderate demands. Thus:

> Hypothesis 4a: In the context of chronic moderate demands, emotional exhaustion will increase more for experienced individuals than newcomers.

We expect a similar pattern for affective commitment on the same resource depletion basis (Hobfoll, 1989). As noted, we expect the daily onslaught of moderate work demands to result in a gradual decline in affective commitment

on average, but this decline is likely to differ as a function of experience, with newcomers experiencing a more gradual decline. The honeymoon and hangover effect (Boswell, Boudreau, & Tichy, 2005, Boswell, Shipp, Payne, & Culbertson, 2009) suggests that when starting a new job newcomers have an initial and brief period of elevated job attitudes (honeymoon; similar to our observation period) followed by a gradual decline (hangover). The subsequent decline is thought to result from newcomers' accumulated experiences which reveal the realities—the good and the bad—of the job over the months and years following their onboarding. In contrast, experienced members are likely to experience a general decline (Boswell et al., 2005). Theory suggests that individuals' resources deplete as they cope with stressors over time (Hobfoll, 1989). Without replacing these resources, individuals may be more impacted by daily stressors (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001). Along these lines, research shows even after a respite, employees tend to return to their previous levels of stress when they return to work (Westman & Eden, 1997). Thus, we propose that the trajectories of affective commitment are moderated by prior exposure, in the form of experience, such that experienced individuals demonstrate greater decline over time (less resilient pattern) than newcomers.

> Hypothesis 4b: In the context of moderate demands, affective commitment will decrease more over time for experienced individuals than newcomers.

Resilience and Retention

The above hypotheses posit that resilience is reflected in stable trajectories of low emotional exhaustion and high affective commitment in the face of chronic moderate demands, which can further be explained by individual differences in emotional stability and prior experience. The literature suggests these response pattern variations should have predictable relationships with organizationally relevant outcomes such as retention.

Therefore, as a final set of hypotheses, we predict that the relationship between individuals' emotional exhaustion and affective commitment trajectories will be related to their retention in the organization. Research shows that trait resilience is positively related to intention to remain (Davies, Stoermer, & Froese, 2019; Hudgins, 2016). Relatedly, individual differences in psychological capital, a construct encompassing resilience, have been found to be predictive of intention to remain (Avey et al., 2009). We expect that dynamic resilience will also predict intent to remain and retention. Trajectory-based research found that patterns of declining affective commitment are associated with patterns of growing turnover intentions (Bentein

et al., 2005). This finding suggests that individuals who exhibit a more re-
silient response pattern (i.e., less decline in affective commitment) are likely to
report a greater intent to remain. Therefore, we posit that more resilient
trajectories are positively associated with individuals' intent to remain. In
other words, individuals with less steep increases in negative emotional
exhaustion and individuals with less steep declines in affective commitment
will report greater intentions to remain in the organization.

> Hypothesis 5a: Emotional exhaustion trajectories will predict intention to
>   remain such that the steeper the increase in emotional exhaustion over
>   time, the lower the intention to remain.
> Hypothesis 5b: Affective commitment trajectories will predict intention to
>   remain such that the steeper the decline in commitment over time, the
>   lower the intention to remain.

Intent to remain serves as a precursor of retention behaviors (Mobley,
Griffeth, Hand, & Meglino, 1979; Tett & Meyer, 1993). Given the hypoth-
esized association between resilience and intention to remain, it is likely that
resilience trajectories predict retention behavior through intentions. We
therefore expect that response trajectories for emotional exhaustion and
commitment will function as distal antecedents of retention through intent to
remain.

> Hypothesis 6a: The emotional exhaustion trajectory will indirectly predict
>   retention, through intent to remain.
> Hypothesis 6b: The affective commitment trajectory will indirectly predict
>   retention through intent to remain.

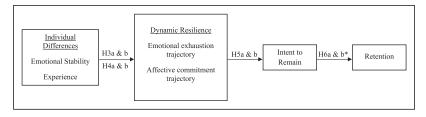Our hypothesized models for dynamic resilience are depicted in Figure 1.

Figure 1. Conceptual model of resilience (inferred from affective commitment
trajectories) and retention. *H6a and H6b refer to the indirect effects of dynamic
resilience trajectories on retention through intent to remain.

Method

Setting

This study was conducted in a marching band at a large university in the United States. Band members participate in frequent performance cycles, and high levels of commitment are required to meet the effort and time demands of membership in a marching band. Each week presents a new performance task (halftime performance) and members of the organization experience ongoing demands (e.g., coursework, practice schedules, football game days, and other public performances) together throughout the season. Similar to more traditional work contexts, members of the organization receive benefits for their participation. For example, members get compensated in the form of tuition reductions (up to 50% for out of state students), and music majors have compulsory participation as a degree requirement.

Our specific sample setting is affiliated with an NCAA Division I football program. The full organization performs in front of more than 80,000 fans at every home game, and games are typically televised on national broadcasts. Collegiate marching bands are interdependent musical organizations (e.g., Murnighan & Conlon, 1991) that are tied closely to football teams and perform music and drill (marching) routines before, during, and after football games. Because of their interdependence, collegiate marching bands' success requires a high level of engagement from their members throughout the football season.

The context provides a strong basis for examining within- and between-individual variation in dynamic resilience because all members are exposed to similar (though not exact) time demands and potential role conflicts both within the marching band and the broader university setting. Membership in the marching band involves a significant investment of time that encroaches on time available for other academic and personal activities. Between four weekly rehearsals and game day preparation and performance, band members are committed to roughly 20 hours per week, not including their individual preparation time. Therefore, the role demands in this setting offered the opportunity to examine role factors (e.g., overload) as a chronic moderate demand.

Sample

Our sample organization had 382 members solicited for voluntary participation in the longitudinal study. Members of the research team met with the entire organization to explain the study and acquire participant consent. One of the advantages of our analytic approach (described below) is the ability to

analyze individual cases with missing data in some of the observation periods. Therefore, we solicited responses from all potential respondents for every survey occasion. A recommended minimal requirement for growth curve modeling is three observations (Bliese & Ployhart, 2002). In total, 314 individuals provided at least three repeated-measures responses representing a participation rate of 82%. On average, individuals completed more than nine survey instances (median of 11 surveys). Overall, 146 respondents (38% of the total members) provided repeated-measures responses for all 12 survey occasions. The average age of respondents was 19 and 50% were female (50% male).

Procedure

To test the hypotheses, we implemented a longitudinal repeated-measures study design that consisted of an initial assessment of subject personality characteristics and demographics, 12 repeated-measures surveys, an end of season survey, and archival follow-up for actual retention. The repeated-measures surveys were administered weekly during the first 3 months of the season; the first instance was included with the personality assessment at the beginning of the marching band season, several weeks before the first football game. The weekly surveys assessing emotional exhaustion and affective commitment were administered via email using the Qualtrics survey platform at the conclusion of rehearsal every Wednesday. The end of season survey was used to capture intent to remain, described below, and the organization roster was provided at the beginning of the following season to assess retention.

Measures

Emotional stability. We used a 10-item scale adapted from Goldberg's (1992) big five personality assessment. Respondents rated the items using a 5-point Likert scale from (1) *strongly disagree* to (5) *strongly agree*. The items included "I change my mood a lot" and "I have frequent mood swings." Emotional stability was measured in the initial personality survey and was reliable ($\alpha = 0.83$).

Prior experience. We created a categorical variable identifying prior experience wherein organizational newcomers were coded with 1 and all others were coded with 0 (e.g., Dunford et al., 2012). Because our sample organization has discrete periods (seasons), it is easy to distinguish between newcomers (those who are new to the organization in a particular season) and experienced individuals (those who have at least one previous season of experience).

Emotional exhaustion. We used a 2-item scale adapted from the Maslach Burnout Inventory (Maslach et al., 1996). We employed a shortened scale to avoid respondent fatigue from repeated use of a longer multi-item scale (Jones & Shah, 2016; Wanous, Reichers, & Hudy, 1997). Respondents were asked to consider their experiences in the marching band and on campus during the previous week and then rated the items using a 5-point Likert scale from (1) *strongly disagree* to (5) *strongly agree*. The items were "I feel emotionally drained" and "I feel burned out." These reduced items were chosen because of their high factor loadings from the Maslach Burnout Inventory (Maslach, Jackson, & Leiter, 1996) scale development and adapted to our empirical context for weekly use. Emotional exhaustion was measured in each of the weekly surveys for the repeated-measures design. The items were reliable across each week of data collection (α ranged from 0.76 to 0.92).

Affective commitment. We used a 2-item scale adapted from Allen and Meyer's (1990) organizational commitment scale. As with emotional exhaustion, we employed a shortened scale to avoid respondent fatigue from repeated use of a longer multi-item scale (Jones & Shah, 2016; Wanous et al., 1997). Respondents were asked to consider their experiences in the marching band and on campus during the previous week and then rated the items using a 5-point Likert scale from (1) *strongly disagree* to (5) *strongly agree*. The items were "I feel like 'part of the family' in the (marching band)" and "I feel a strong sense of belonging to the (marching band)." These reduced items were chosen because of their high factor loadings from the affective commitment items in Allen and Meyer's (1990) scale development and adapted to our empirical context for weekly use. The items were reliable across each week of data collection (α ranged from 0.86 to 0.91).

Intent to remain. We used a single-item adapted from Chen, Ployhart, Thomas, Anderson, and Bliese (2011) turnover intention measure. Chen et al.'s (2011) measure included two items. Given the extremely low rate of in-season turnover and the much higher rate of between-season turnover in collegiate marching bands the item about the frequency of thoughts about quitting was not relevant to our context. Therefore, in the week after the marching band season had ended, members rated the extent to which "I plan to return to the band next season" using a 5-point Likert scale from (1) *strongly disagree* to (5) *strongly agree*. Importantly, graduating members could not return to the organization. Thus, we created a subset of our data to only include non-graduating members for analysis and this subset consisted of 224 subjects.

Retention. Retention was a dichotomous measure created by comparing the 224 non-graduating subjects against the organization's active roster in the following school year. Those who remained in the organization were coded as 1, and those who did not were coded as 0.

Time. Time was indexed by 12 measurement occasions (0–11) to examine linear growth.

Analytic Approach

To test our hypothesized relationships, we employed mixed effects growth modeling to measure change trajectories and variations in change patterns across individuals (Singer & Willett, 2003). In total, we analyzed 2,955 responses for emotional exhaustion and 2,954 for affective commitment from 314 participants, with 146 respondents having completed every survey instance. Missing survey instance responses were treated as random. The 314 participants were nested within 13 instrumental groups. We examined to see if it was necessary to account for the nested nature of the data at the group level in a three-level model. The interclass correlation coefficients or ICC(1) values at the group level were relatively low (0.06 for both emotional exhaustion and affective commitment). We found no significant variation (emotional exhaustion log likelihood ratio= 0.17, *ns*; affective commitment log likelihood ratio= 1.33, *ns*) between models with random intercepts associated with individuals nested within groups and those associated only with the individual level. In contrast, the ICC(1) values at the individual level were 0.62 for emotional exhaustion 0.67 for affective commitment, suggesting that roughly 62% and 67% of the variance in repeated measures of emotional exhaustion and affective commitment was due to the individual. Therefore, we tested a two-level model with repeated measures nested within participant and omitted the third level. We also tested and controlled for autocorrelation which is common in repeated-measures analysis (Bliese & Ployhart, 2002).

Hypotheses 3a, 3b, 4a, and 4b examined predictors of resilient trajectories which were analyzed as individual-level moderators of differences in within-individual trajectories (a slopes-as-outcomes model). A strength of our approach is the ability to consider person-level factors as predictors of slope differences using person-level predictors assessed at baseline, and testing for their interaction effects with time. Hypotheses 5a, 5b, 6a, and 6b involved using individual trajectories to predict intent to remain. Based on the growth-models, we estimated empirical Bayes estimates of intercepts (i.e., baseline levels) and trajectories for each participant for both outcomes (see Chen et al., 2011).

Results

Tables 1 and 2 contains descriptive statistics and correlations for the variables in the study. Table 1 summarizes the outcome variables at the beginning, middle, and end of the data collection for the entire sample while Table 2 summarizes the subset of non-graduating members used for Hypotheses 5a, 5b, 6a, and 6b.

Hypothesis Tests

Before testing our hypotheses, we looked for evidence of ongoing stressors, and the accumulation of stressors, during the study. We first examined participants' perceptions of workload during the observation period, along with average emotional exhaustion and affective commitment trajectories. Workload was measured each week using a two-item adaptation of the role overload scale of Cammann, Fichman, Jenkins, and Klesh (1983) and was reliable across the study (α ranged from 0.69 to 0.91). Average workload across the observation period was 2.92 (out of 5), and there was a positive average workload trajectory ($b= 0.03$, $t= 7.91$, $p < 0.001$). This result means that, on average, individuals in our sample had increasing and accumulating perceptions of workload over time and provides initial evidence supporting the idea that chronic demands were experienced by members of the organization.

In support of Hypotheses 1a, there was a positive main effect of time for emotional exhaustion (see Model 1, Table 4) indicating that, on average, participants had increasing levels of emotional exhaustion over time. In support of Hypotheses 1b, we also observed a negative main effect of time on affective commitment (see Model 1, Table 5) indicating that, on average, participants had decreasing affective commitment over time.

Hypotheses 2a and 2b predicted individual differences in emotional exhaustion and commitment trajectories. Table 3 presents results of the model comparison procedures used to test Hypothesis 2. The model comparisons involve estimating a baseline model with random intercepts to models where both intercepts and slopes were free to vary. The models that included random intercepts and random slopes for emotional exhaustion (Model 2, Table 3) and affective commitment (Model 4, Table 3) provided the best fit. These results suggest that there is significant variance between individuals' emotional exhaustion and affective commitment trajectories supporting Hypotheses 2a and 2b.

Hypothesis 3a predicted that individuals' emotional exhaustion trajectories over time would be moderated by emotional stability, such that individuals

Table 1. Correlation Matrix for Full Sample.

Variable	M	SD	1	2	3	4	5	6	7	8
1. Emotional exhaustion time 0	2.71	1.04	—							
2. Emotional exhaustion time 5	2.88	1.13	.47*	—						
3. Emotional exhaustion time 11	3.16	1.13	.31*	.60*	—					
4. Affective commitment time 0	4.22	.76	-.27*	-.06	-.05	—				
5. Affective commitment time 5	4.07	.77	-.23*	-.21*	-.08	.45*	—			
6. Affective commitment time 11	4.05	.79	-.29*	-.25*	-.24*	.42*	.67*	—		
7. Emotional stability	3.22	.64	-.34*	-.41*	-.36*	.17*	.21*	.27*	—	
8. Experience[1]	.39	.49	-.07	-.20*	-.20*	-.18*	-.14*	.08	-.04	—

n= 314. Time$_0$, Time$_5$, and Time$_{11}$ displayed for each outcome in Table 1 as the beginning, middle, and end point of the dataset.
[1]Experience is coded 0=experienced member, 1 = newcomer.
*p < .05.

Table 2. Correlation Matrix for Non-Graduating Subset.

Variable	M	SD	1	2	3	4	5	6	7	8
1. Intent to remain	4.14	1.10	—							
2. Retention	.21	.41	.50*	—						
3. Emotional exhaustion trajectory[1]	.04	.06	.06	.05	—					
4. Emotional exhaustion level[2]	2.66	.75	−.16*	.03	.09	—				
5. Affective commitment trajectory[1]	−.01	.03	.25*	.08	−.12	−.13*	—			
6. Affective commitment level[2]	4.13	.60	.34*	.15*	.06	−.33*	−.07	—		
7. Emotional stability	3.18	.65	.06	.00	−.18*	−.51*	.13*	.18*	—	
8. Experience[3]	.44	.50	.24*	.01	−.18*	−.14*	.26*	−.10	.01	—

n= 224.
[1]Level variables are Bayesian estimates of the within-person intercept and represent the baseline level of the variable.
[2]Trajectory variables are Bayesian estimates of the within-person slopes and represent the individual's trajectory.
[3]Experience is coded 0=experienced member, 1 = newcomer.
*p < .05.

lower in emotional stability will exhibit greater increases in emotional exhaustion over time. Hypothesis 3a was tested by examining the interaction between time and emotional stability reported in Model 3 (Table 4), which was not significant. Therefore, Hypothesis 3a was not supported.

Hypothesis 3b predicted that individuals' affective commitment trajectories over time would be moderated by emotional stability, such that individuals lower in emotional stability will exhibit greater decreases in affective commitment over time. Hypothesis 3b was tested by examining the interaction between time and emotional stability reported in Model 3 (Table 5). A significant interaction supports Hypothesis 3b. The moderated relationship in Hypothesis 3b is depicted in the plot of affective commitment over time in Figure 2. The plot indicates that individuals high in emotional stability had relatively stable and high affective commitment over time, while individuals low in emotional stability experienced declining affective commitment over time.

Table 3. Model Comparison of Random Effects.

	Emotional Exhaustion	
	Model 1	Model 2
Fit statistic	Random intercepts	Random intercepts and random slopes
AIC	6843.24	6584.71
BIC	6897.21	6620.65
Log likelihood	−3417.62	−3286.35
DF	4	6
△ DF		2
Log likelihood ratio		262.54
p-value		<.001
	Affective commitment	
	Model 3	Model 4
Fit statistic	Random intercepts	Random intercepts and random Slopes
AIC	4530.62	4319.03
BIC	4554.58	4354.97
Log likelihood ratio	−2261.31	−2153.51
DF	4	6
△ DF		2
Log likelihood ratio		215.59
p-value		<.001

Hypothesis 4a predicted that individuals' emotional exhaustion trajectories over time would be moderated by prior experience, such that newcomers would demonstrate less change over time. Hypothesis 4a was tested by examining the interaction between time and experience reported in Model 4 (Table 4). A significant interaction obtained for emotional exhaustion supports Hypothesis 4a. The moderated relationship in Hypothesis 4a is depicted in the plot of emotional exhaustion over time in Figure 3. The plot indicates that newcomers had less pronounced emotional exhaustion growth over time, while experienced members demonstrated increasing emotional exhaustion over time.

Hypothesis 4b predicted that individuals' affective commitment trajectories over time would be moderated by prior experience, such that newcomers would have greater growth over time. Hypothesis 4b was tested by examining the interaction between time and experience reported in Model 4 (Table 5). A significant interaction obtained for affective commitment supports Hypothesis 4b. The moderated relationship in Hypothesis 4b is depicted

Table 4. Emotional Exhaustion Regression Results: Mixed Effect Growth Modeling.

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Constant	2.64*** (.05)	4.92*** (.22)	4.82*** (.24)	4.89*** (.22)	4.78*** (.24)
Time	.04*** (.01)	.04*** (.01)	.06** (.02)	.05*** (.01)	.08** (.03)
Emotional stability		-.68*** (.07)	-.64*** (.07)	-.68*** (.07)	-.64*** (.07)
Experience		-.28** (.09)	-.28** (.09)	-.19* (.09)	-.19* (.09)
Time*Emotional stability			-.01 (.01)		-.01 (.01)
Time*Experience				-.03* (.01)	-.03* (.01)

$n = 2955$ total observations nested within 314 individuals for emotional exhaustion. Unstandardized regression coefficients are reported (standard errors in parenthesis). Experience is a dichotomous variable coded 1 for newcomers and 0 for other members.
*$p < .05$. **$p < .01$. ***$p < .001$.

Table 5. Affective Commitment Regression Results: Mixed Effect Growth Modeling.

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Constant	4.16*** (.04)	3.40*** (.19)	3.57*** (.20)	3.45*** (.19)	3.62*** (.20)
Time	-.01* (.00)	-.01* (.00)	-.05* (.02)	-.02* (.00)	-.07*** (.02)
Emotional stability		.24*** (.06)	.19** (.06)	.24*** (.06)	.19** (.06)
Experience		-.06 (.07)	-.06 (.07)	-.18* (.08)	-.18* (.08)
Time*Emotional stability			.01* (.01)		.01* (.01)
Time*Experience				.03*** (.01)	.03* (.01)

$n = 2954$ total observations nested within 314 individuals. Unstandardized regression coefficients are reported (standard errors in parenthesis). Experience is a dichotomous variable coded 1 for newcomers and 0 for other members.
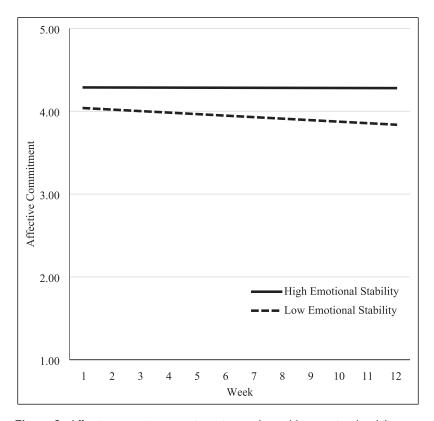*$p < .05$, **$p < .01$, ***$p < .001$.

Figure 2. Affective commitment trajectories moderated by emotional stability.

in the plot of affective commitment over time in Figure 4. The plot indicates that newcomers exhibited an increasing trajectory for affective commitment over time, while experienced members demonstrated declining trajectory for affective commitment over time.

Hypotheses 5a, 5b, 6a, and 6b predicted that individuals' outcome trajectories would have an impact on their intent to remain and actual retention in the organization. Recall, the tests of these hypotheses were conducted on the subset of non-graduating members. To test these hypotheses, we used the empirical Bayes estimates of intercepts and slopes as predictors of intent to remain in a series of regression models summarized in Table 6.

Hypothesis 5a was tested by the emotional exhaustion trajectory parameter reported in Model 1 (Table 6). While there is a negative relationship between individuals' baseline emotional exhaustion and their intent to remain in the organization, their emotional exhaustion trajectory was not significantly
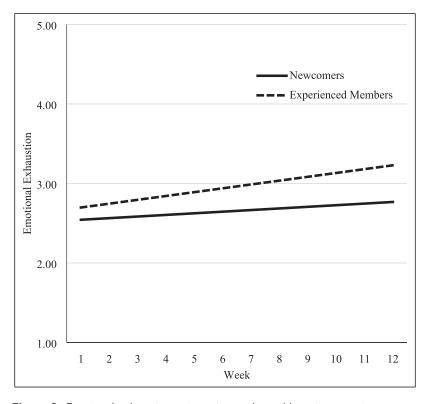
Figure 3. Emotional exhaustion trajectories moderated by prior experience.

related to intent to remain. Therefore, Hypothesis 5a was not supported. Hypothesis 5b was tested by the affective commitment trajectory parameter reported in Model 2 (Table 6). There is a positive relationship between individuals' affective commitment trajectories and their intent to remain in the organization, over and above the positive impact of baseline affective commitment. Recall that overall, there was a negative affective commitment trajectory, meaning that on average individuals' affective commitment declined over time. Therefore, the positive relationship between the trajectory and intent to remain indicates that individuals whose affective commitment trajectory manifested greater stability (i.e., resilience) were more willing to report intent to remain in the organization. Therefore, Hypothesis 5b was supported.

Hypotheses 6a and 6b proposed that emotional exhaustion and affective commitment trajectories would have an indirect effect on season-to-season retention, summarized in Table 7. We tested these hypotheses using least
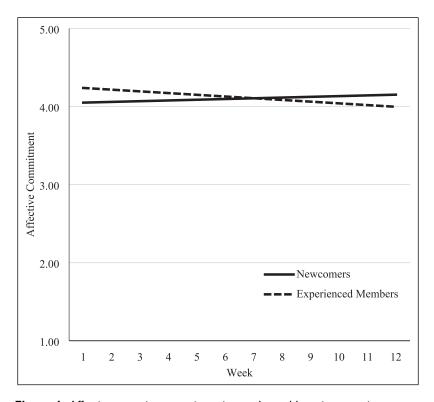
Figure 4. Affective commitment trajectories moderated by prior experience.

Table 6. Intent to Remain Regression Results.

Variable	Model 1	Model 2	Model 3
Constant	4.73*** (.27)	1.50** (.46)	1.53* (.62)
Baseline emotional exhaustion	−.24* (.10)		−.01 (.10)
Emotional exhaustion trajectory	1.42 (1.30)		1.40 (1.19)
Baseline affective commitment		.66*** (.11)	.65*** (.12)
Affective commitment trajectory		9.22*** (2.02)	9.44*** (2.06)

n= 224 individuals. Unstandardized regression coefficients are reported (standard errors in parenthesis).
*p < .05, **p < .01, ***p < .001.

Table 7. Retention Mediation Results.

Direct effects	Intent to remain	Retention	Intent to remain	Retention
Constant	4.73*** (.27)	−4.39*** (1.17)	1.50** (.48)	−2.68* (1.33)
Baseline emotional exhaustion	−.24* (.10)	.47† (.27)		−.09 (.35)
Emotional exhaustion trajectory	1.42 (1.30)	1.27 (3.66)		−4.71 (5.98)
Baseline affective commitment			.66*** (.11)	
Affective commitment trajectory			9.22*** (2.02)	1.12*** (.20)
Intent to remain		1.14*** (.19)		
Indirect effects				
Emotional exhaustion trajectory->Intent to remain		.11 [-.14, .38]		
Affective commitment trajectory->Intent to remain				.57*** [.10, .62]

n= 224 individuals. Unstandardized regression coefficients are reported (standard errors in parenthesis). Models of retention used logistic regression. Average mediation effects reported with 95% confidence intervals created from a nonparametric bootstrap of 1000 simulations.
†p < .10, *p < .05, **p < .01, ***p < .001.

squares regression for our mediator and logistic regression for our dichotomous retention outcome in the mediation package in R (Tingley, Yamamoto, Hirose, Keele, & Imai, 2014). We used a nonparametric bootstrap with 1000 draws to create 95% confidence intervals for the hypothesized indirect effects. The average indirect effect from emotional exhaustion trajectory through intent to remain to retention ($\beta = 0.11$, $CI_{lower} = -0.14$, $CI_{upper} = 0.38$) was not significant. This finding is expected as the emotional exhaustion trajectory was not significantly related to intent (Hypothesis 5a) meaning that the predictor was not significantly related to the mediator. In short, Hypotheses 6a was not supported. In contrast, the average indirect effect from affective commitment trajectory through intent to remain to retention ($\beta = 0.57$, $CI_{lower} = 0.10$, $CI_{upper} = 0.62$) was positive and significant. These results indicate that, through intentions, the affective commitment trajectory was positively associated with greater likelihood of retention supporting Hypotheses 6b. The positive relationship between the trajectory and retention, through intent to remain, indicates that individuals whose affective commitment trajectory manifested greater stability (i.e., resilience) were more likely to return to the organization the following school year.

Supplemental Analyses

We also conducted a series of additional analyses around the moderated relationships in Hypotheses 3a, 3b, 4a, and 4b to control for potential alternative explanations (Table 8 and 9). We specifically examined the impact of tuition reduction, major requirements, and within season travel to away football games. We measured tuition reduction by dummy coding those members who noted, at the beginning of the season, that the reduction was the greatest benefit of their membership (31 in total) as 1 and coding all others as 0. We measured major requirements by dummy coding those members who indicated, at the beginning of the season, they were music majors (58 in total) as 1 and coding all others as 0. Finally, we measured within season travel by summing the number of self-reported away trips each individual made with the band during the study period (ranging from 0 to 4). When controlling for these covariates, the pattern of significance matched our results, providing additional support for Hypotheses 3b, 4a, and 4b.

Additionally, we conceptualized change as linear; however, there may be reasons to hypothesize and test non-linear effects. For instance, exposure to chronic demands such as heavy workloads may show a cumulative effect that increases in a non-linear fashion over time. While not initially hypothesized, the issue of non-linearity was brought up in the review process. There was no evidence of quadratic effects for emotional exhaustion (Model 1; Table 10), but it appears that, on average, the decreasing affective commitment trajectory

Table 8. Emotional Exhaustion Regression Results: Mixed Effect Growth Modeling.

Variable	Model 1	Model 2	Model 3	Model 4
Constant	4.81*** (.23)	4.70*** (.25)	4.77*** (.23)	4.66*** (.25)
Time	.04*** (.01)	.07** (.03)	.05*** (.01)	.08** (.03)
Emotional stability	−.65*** (.07)	−.61*** (.07)	−.65*** (.07)	−.61*** (.07)
Experience	−.25** (.09)	−.25** (.09)	−.16† (.09)	−.16† (.09)
Funding	.41** (.15)	.41** (.15)	.41** (.15)	.41** (.15)
Major requirement	.08 (.11)	.08 (.11)	.08 (.11)	.08 (.11)
Travel	−.04 (.04)	−.04 (.04)	−.04 (.04)	−.04 (.04)
Time*Emotional stability		−.01 (.01)		−.01 (.01)
Time*Experience			−.03* (.01)	−.03* (.01)

N = 2955 total observations nested within 314 individuals. Unstandardized regression coefficients are reported (standard errors in parenthesis). Experience is a dichotomous variable coded 1 for newcomers and 0 for other members. Funding is a dichotomous variable coded 1 for members who indicated that scholarship funding was primary benefit of membership. Major requirement is a dichotomous variable coded 1 for music majors. Travel is a count of the number of away games an individual traveled to during the study.
$^{†}p < .10$, $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$.

Table 9. Affective Commitment Regression Results: Mixed Effect Growth Modeling.

Variable	Model 1	Model 2	Model 3	Model 4
Constant	3.39*** (.19)	3.55*** (.21)	3.44*** (.19)	3.61*** (.21)
Time	−.01* (.00)	−.05** (.02)	−.02*** (.00)	−.07*** (.02)
Emotional stability	.23*** (.06)	.18** (.06)	.23*** (.06)	.17** (.06)
Experience	−.08 (.07)	−.08 (.07)	−.16† (.09)	−0.16† (0.09)
Funding	−.12 (.12)	−.13 (.12)	−.13 (.12)	−.13 (.12)
Major requirement	.09 (.09)	.09 (.09)	.09 (.09)	.09 (.09)
Travel	.06† (.03)	.06† (.03)	.06† (.03)	.06† (.03)
Time*Emotional stability		.01* (.01)		.01* (.01)
Time*Experience			.03*** (.01)	.03*** (.01)

N = 2954 total observations nested within 314 individuals. Unstandardized regression coefficients are reported (standard errors in parenthesis). Experience is a dichotomous variable coded 1 for newcomers and 0 for other members. Funding is a dichotomous variable coded 1 for members who indicated that scholarship funding was primary benefit of membership. Major requirement is a dichotomous variable coded 1 for music majors. Travel is a count of the number of away games an individual traveled to during the study.
$^{†}p < .10$, $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$.

Table 10. Emotional Exhaustion Non-Linear Regression Results: Mixed Effect Growth Modeling.

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Constant	2.64*** (.05)	4.85*** (.22)	4.43*** (.25)	2.68*** (.07)	4.49*** (.26)
Time	.03† (.02)	.03† (.02)	.25** (.09)	.06** (.02)	.28** (.09)
Time (quadratic)	.00 (.00)	.00 (.00)	−.02* (.01)	.00 (.00)	−.02** (.01)
Emotional stability		−.65*** (.07)	−.55*** (.08)		−.56*** (.08)
Experience		−.26** (.09)		−.09 (.11)	−.12 (.10)
Time*Emotional stability			−.07** (.03)		−.07*** (.03)
Time*Experience				−.07* (.03)	−.07* (.03)
Time (quadratic)*Emotional stability			.01* (.00)		.01* (.00)
Time (quadratic)*Experience				.00 (.00)	.00 (.00)

$n = 2955$ total observations nested within 314 individuals. Unstandardized regression coefficients are reported (standard errors in parenthesis). Experience is a dichotomous variable coded 1 for newcomers and 0 for other members.
†$p < 0.10$, *$p < .05$, **$p < .01$, ***$p < .001$.

becomes less negative over time (Model 1; Table 11). There was a subtle and significant interaction between curvilinear time and emotional stability predicting emotional exhaustion, such that newcomers' emotional exhaustion trajectories grew over time while experienced members' emotional exhaustion trajectories plateaued (Model 3; Table 10). This may be due to the bounded nature of a collegiate marching band season. Nevertheless, the non-linear effects for emotional exhaustion and affective commitment did not change the three significant results for our substantive hypotheses. The plot of the interaction is shown in Figure 5 where emotional exhaustion increases at a decreasing rate for individuals low in emotional stability. Future research and theory might want to consider non-linear effects when examining trajectories of outcomes.

Discussion

Resilience is fundamentally a process that can be explored by examining response patterns over time (Bonanno, 2004). We conceptualized resilience to chronic demands as patterns involving forestalled emotional exhaustion and sustained affective commitment over time. Our examination revealed significant between-individual variation in trajectories and showed that individuals with trajectories reflective of resilience tended to be high in emotional stability and new to the organization. Finally, we examined how these trajectories related to intent to remain and actual retention. We found that individuals whose affective commitment showed little decline were more willing, and more likely, to remain in the organization.

Theoretical Implications

Our approach extended the literature in three ways. First, we illustrate how theoretical ideas about resilience built around understanding responses to acute and potentially traumatic events can be extended to understanding chronic stressors common in occupational settings. That is, we show that the well-established idea that resilience is best conceptualized as the trajectory of responses to an acute event (e.g., Galatzer-Levy et al., 2018) can be extended to chronic situations where stressors like work overload accumulate over time. Our findings suggest that for chronic moderate demands, dynamic resilience is a matter of degree, with less resilient individuals displaying a gradual decline in functioning. These trajectories had important consequences for the organization that are indirectly predictive of retention—a finding in line with research demonstrating that the resilience trajectory in response to acute trauma is predictive of important personal outcomes (e.g., likelihood of

Table 11. Affective Commitment Non-Linear Regression Results: Mixed Effect Growth Modeling.

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Constant	4.19*** (.04)	3.41*** (.19)	3.54*** (.21)	4.27*** (.05)	3.64*** (.21)
Time	−.03** (.01)	−.03** (.01)	−.06 (.06)	−.05*** (.01)	−.08 (.06)
Time (quadratic)	.002* (.00)	.002* (.00)	.00 (.00)	.002* (.01)	.00 (.00)
Emotional stability		.25*** (.06)	.20** (.06)		.20** (.06)
Experience		−.05 (.07)		−.20* (.08)	−.19* (.08)
Time*Emotional stability			.01 (.02)		.01 (.02)
Time*Experience				.05† (.02)	.05† (.02)
Time (quadratic)*Emotional stability		.00 (.00)			.00 (.00)
Time (quadratic)*Experience				.00 (.00)	.00 (.00)

n = 2954 total observations nested within 314 individuals. Unstandardized regression coefficients are reported standard errors in parenthesis). Experience is a dichotomous variable coded 1 for newcomers and 0 for other members
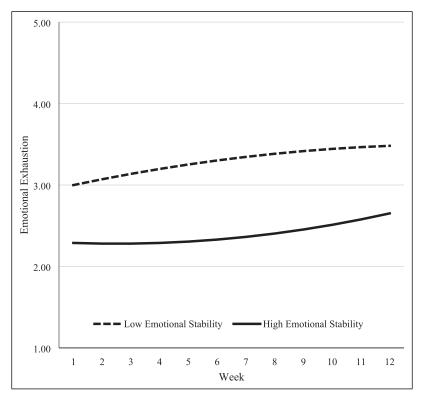†*p* < .10, *p* < .05. **p* < .01. ****p* < .001.

Figure 5. Curvilinear emotional exhaustion trajectories moderated by emotional stability.

mortality; Galatzer-Levy & Bonanno, 2014). In short, our findings show that the resilience trajectory in response to chronic moderate demands can have important consequences for the organization.

Our example used emotional exhaustion and affective commitment trajectories. These two indices were relevant to our context because we did not anticipate that college students in the marching band would experience high levels of depression or other mental health symptoms over the course of the study. In other contexts, trajectories may be based on indices that are more directly relevant to the situation. For instance, focusing on depression in the context of experiencing a heart-attack (Galatzer-Levy & Bonanno, 2014) is logical as depression is a likely consequence of an acute health event. Alternatively, capturing trajectories of person-environment fit over the course of one's career (Jansen & Shipp, 2019) could be used to assess resilience to

events at work and how those trajectories impact turnover. Ultimately, our extension of resilience research provides a foundation to explore resilience from a variety of context-specific indices. Our point is simply to underscore the need to base trajectories off of context-specific indices when viewing resilience as a process.

Second, we believe this conceptual and analytic framework offers greater precision and insight into the nature of resilience and its consequences in organizational settings. The core of our dynamic resilience approach is to examine within-person differences in responses over time. Thus, it requires a multilevel framework where the lowest unit of analysis is the individual at a given time. By nesting time within person (Korsgaard et al., 2018), we are able to examine between-individual variation in response trajectories and the factors that differentiate these trajectories.

Our approach can be particularly insightful if researchers collect relevant data over a sufficiently long period of time with sufficient frequency to model trajectories. Currently, longitudinal studies in applied settings tend to be relatively short (e.g., Experience Sampling Designs often are conducted over 2 weeks) with few examples modeling trajectories (see Bliese, Schepker, Essman, & Ployhart, 2020). We believe, however, that greater insights into concepts like resilience could be obtained by examining data collected on a weekly or monthly basis over time periods between 6 months to a year. Many organizationally relevant events take months (or more) to unfold. For example, the COVID-19 pandemic crisis had an acute period, but also involved chronic demands playing out over a period of a year or more. Researchers collecting monthly or weekly data as events like pandemics unfold will be able to shed light on predictors of dynamic resilience. Likewise, employees in organizations forced to conduct layoffs or in the process of a merger or acquisition are likely to experience a series of events over time that are more characteristic of chronic stressors than acute stressors.

Importantly, within the multilevel model we have illustrated, chronic demands need not impact an entire organization nor be chronologically aligned (i.e., all starting on the same date). For instance, studies that follow new managers or new parents and collect monthly well-being and commitment data for 6 months or a year could shed valuable insights on factors that predict resilient patterns. Neither being promoted to a management role nor becoming a new parent is considered a traumatic event, but clearly individuals differ in how they respond to these new ongoing demands in ways that could be defined as being more or less resilient. In short, we believe that some adjustments to the temporal designs used to collect data in organizations, along with the notion that resilience represents a pattern over time, open numerous opportunities for novel and important research.

Third, the moderating roles of emotional stability and experience in individuals' emotional exhaustion and affective commitment trajectories over time shed light on individual differences that are predictive of dynamic resilience. Research suggests that individual differences play a role in resilience (e.g., Chen, McCabe, & Hyatt, 2017; Larson, & Luthans, 2006; Mache et al., 2014; Pulakos et al., 2002; Shatté, Perlman, Smith, & Lynch, 2017; Youssef & Luthans, 2007) and point specifically to emotional stability (e.g. Boyes & French, 2010; Judge, Simon, Hurst, & Kelley, 2014), and experience (e.g., Deadrick et al., 1997; Tesluk & Jacobs, 1998) as potential factors. However, previous research was lacking on a joint examination of the roles of individual differences and external stimuli on dynamic resilience. This study demonstrated that emotional stability and experience are related to the process of resilience to exogenous, shared stimuli. Specifically, by modeling resilience as trajectories of responses, we were able to demonstrate that dynamic resilience differs across individuals as a function of both emotional stability and experience. By developing and testing hypotheses about between-individual variations in outcome trajectories, we offer a level of specificity that should advance theory on resilience and variations in resilient responses to adversity. Future work could utilize our multilevel within-individual approach to further unpack other individual factors associated with resilience, such as personality, cultural orientation, personal resources, and work demands (Hartmann et al., 2020).

The impact of emotional stability and experience on dynamic resilience has implications for understanding not only for whom but when the consequences of organizational chronic moderate demands may be more or less adverse. For example, seemingly mild stressors for emotionally unstable individuals may not initially appear to be problematic. However, over time these stressors may accumulate and become more problematic for outcomes such as affective commitment. Similarly, the findings show a new perspective on the role of organizational experience. Even with a break between the last exposure to moderate demands and the current stressors (e.g., break between marching band seasons and academic school years), resiliency can be worn down. This finding is consistent with previous empirical work on experience (e.g., Bliese et al., 2011) with high-intensity stressors and theory on the cumulative impact of stressors (Hobfoll, 1989). The deleterious impact of experience has implications for recovery between performance cycles where a degree of recovery may happen but full recovery does not seem to occur.

Limitations and Future Directions

This study offers insights into understanding individual differences that impact the process of resilience; however, it is not without limitations. First, resilience is likely to be influenced by attributes of the groups to which an individual belongs (Duchek, 2020; Stoverink et al., 2020). The context of our study offered the opportunity to examine group-level effects because individuals were organized into different groups based on their musical instrument, but the group-level effects for instrumental section were not significant. We suspect, however, that group effects are likely to be influential in other settings. For instance, a team's emotional culture of optimism appears related to dynamic resilience patterns involving performance (Adler et al., 2021). We further anticipate that team and organizational attributes may have a top-down effect on patterns of resilience for its members. Thus, future research should examine the interplay between levels for a holistic understanding of the interrelationships between individual, team, and organizational resilience.

Second, we focused on a context where participants experienced moderate demands. The work overload results provide compelling evidence that demands were present for the sample as a whole particularly given that the observed power for our work overload finding was well above .80 indicating a robust effect in the data (Bliese & Wang, 2020). That said, we acknowledge that chronic demands can vary in terms of intensity and that work overload is only one of many chronic demands facing employees, so we encourage further research in contexts that involve more intense chronic demands.

Third, outside of the measure of emotional stability, we used shortened scales to reduce respondent fatigue. While this technique is common in longitudinal designs similar to our approach (e.g., Chen et al., 2011; Jones & Shah, 2016; Wanous et al., 1997), it does require using a subset of items from established measurements. We carefully selected items based on their factor loadings in the original scale validation work and their applicability to our context. We believe using short scales helped with respondent compliance given the high rates of response from participants; nonetheless, we acknowledge that shortening scales carries risk with respect to construct validity (recall our measures tended to be reliable).

Fourth, our findings may be unique to the context. While, a musical ensemble is an interdependent organization from which findings have a degree of generalizability (e.g., Murnighan & Conlon, 1991), there are some characteristics of a student ensemble that future work can examine. For example, as noted in the sample description, membership in the marching band requires a high degree of engagement and commitment, so in one sense our sample represents a conservative test of the hypotheses. Future research can replicate

our findings in a variety of workplaces that require varying degrees of engagement and commitment (e.g., retail cashiers v. nuclear engineers). Additionally, membership in our sample has a pre-defined end point every season and for potential season-to-season membership because of graduation. The bounded nature of the organization may serve to explain the interaction between curvilinear time and emotional stability predicting emotional exhaustion in the supplementary analysis. However, as evidenced by newcomers making up almost 40% of the organization, the majority of members leave the organization before the end of their four or five years in college. Thus, we would expect similar results for individuals in organizations that are less bounded.

Our unique conceptualization of dynamic resilience offers new directions for research. For example, we suspect that resilience research could be advanced by further integrating dynamic and dispositional approaches. Presumably, the two methods of assessing resilience would be related such that individuals high in dispositional resilience would also tend to have low and stable emotional exhaustion and high and stable affective commitment. To some degree, our emotional stability results provide evidence that dispositional and dynamic approaches are likely to be complementary. That is, emotional stability is a strong predictor of dispositional resilience (Oshioa et al., 2018), so our finding that emotional stability predicted dynamic resilience implies that measures of dispositional resilience would also predict dynamic resilience. Nonetheless, we encourage further work on this integration.

An additional area for follow-up research builds on the findings of Fisher et al. (2019) and Duchek (2020) who suggest a cluster of behavioral and cognitive strategies that should foster resilience. In the case of dynamic resilience to chronic moderate stressors, these strategies may entail some variant of being able to effectively adapt to non-extreme events. Future work could examine the impact of mediating processes on intermediate outcome trajectories by measuring the presumed mediating mechanism half-way through and modeling it as a predictor of response trajectories. Alternatively, there are a number of psychological interventions designed to create lasting and self-reinforcing changes in attitudes and behavior (Walton, 2014), and there may be opportunities to incorporate these into ongoing data collections and compare pre- and post-intervention trajectories (see, Bliese, Adler, & Flynn, 2017; Finkel, Slotter, Luchies, Walton, & Gross, 2013).

Practical Implications

Our framework proposed that intermediate outcome patterns on factors such as commitment reflect the process of dynamic resilience and that these trajectories can influence important outcomes such as retention. In this view,

high levels of stability in individuals' commitment can be beneficial to outcomes relevant for the functioning of organizations. For example, high levels of affective arousal—be it positive or negative—can have deleterious effects on attentional resources and lead to cognitive bias (Bar-Haim, Lamy, Pergamin, Bakermans-Kranenburg, & van IJzendoorn, 2007; Pool, Brosch, Delplanque, & Sander, 2016), thereby undermining judgment and performance. Further, individuals who are able to weather the fluctuations of the work environment are apt to be more resilient to occupational stressors (Diener et al., 2006). It is important, however, to keep in mind that the processes of resilience and adaptation may differ depending on the phenomenon. Rapid, and often sustained change, is crucial to some cognitive and behavioral resilience and adaptation. For example, transitioning to new career roles, such as from an individual contributor to a team leader, requires not only the acquisition of behavioral repertoires but a redefined self-concept (Ibarra, 1999). In contrast, research suggests that adaptive performance is often manifested by relatively frequent and rapid changes in behavioral responses, given the dynamic and flexible work environments common in contemporary organizations (Baard et al., 2014). Applying our process approach to these phenomena may help advance theory, particularly in the area of adaptive performance, where longitudinal theory is nascent (Baard, Rench, & Kozlowski, 2014).

Our conceptual and analytic framework has practical implications for a broader understanding of change as well. As we have illustrated, it is important to examine temporal phenomena as change trajectories over time. This longitudinal orientation reveals that static or infrequent measurements are unlikely to accurately capture the complexity of organizational members' affective states. Annual employee engagement surveys are typically used to assess how employees feel toward their organization. Our study illustrates that such infrequent approaches to understanding engagement are not likely to be predictive of employees' engagement in dynamic workplaces. These snapshot approaches may underestimate important differences or could miss change processes entirely. Thus, our framework suggests that more frequent engagement assessments, such as pulse surveys, are likely to provide a more comprehensive view of engagement from which to set HR strategies.

Conclusion

This study examined variations in individuals' trajectories of emotional exhaustion and affective commitment to better understand the process of resilience. We built hypotheses to explain how individuals' emotional exhaustion and affective commitment trajectories differ, how the individual

differences of emotional stability and experience affect between-individual variation in resilience, and how variations in the process of resilience affect retention. Moving forward, research can benefit from this process-oriented conceptual and analytical approach to understand the nature of resilience with respect to a variety of different occupational contexts.

Declaration of Conflicting Interests

Funding

ORCID iD

Patrick J. Flynn ![ORCID icon] https://orcid.org/0000-0002-0350-8913

References

Adler, A. B., Bliese, P. D., Barsade, S. G., & Sowden, W. J. (2021). Hitting the mark: The influence of emotional culture on resilient performance. *Journal of Applied Psychology* Advance online publication.

Alarcon, G. M. (2011). A meta-analysis of burnout with job demands, resources, and attitudes. *Journal of Vocational Behavior*, *79*(2), 549-562. doi:10.1080/02678370903282600

Alarcon, G., Eschleman, K. J., & Bowling, N. A. (2009). Relationships between personality variables and burnout: A meta-analysis. *Work & Stress*, *23*(3), 244-263. doi:10.1016/j.jvb.2011.03.007

Allen, N. J., & Meyer, J. P. (1990). The measurement and antecedents of affective, continuance and normative commitment to the organization. *Journal of Occupational Psychology*, *63*(1), 1-18. doi:10.1111/j.2044-8325.1990.tb00506.x

Avey, J. B., Luthans, F., & Jensen, S. M. (2009). Psychological capital: A positive resource for combating employee stress and turnover. *Human Resource Management*, *48*(5), 677-693. doi:10.1002/hrm.20294

Baard, S. K., Rench, T. A., & Kozlowski, S. W. J. (2014). Performance adaptation. *Journal of Management*, *40*(1), 48-99. doi:10.1177/0149206313488210

Bar-Haim, Y., Lamy, D., Pergamin, L., Bakermans-Kranenburg, M. J., & van IJzendoorn, M. H. (2007). Threat-related attentional bias in anxious and nonanxious individuals: A meta-analytic study. *Psychological Bulletin*, *133*(1), 1-24. doi:10.1037/0033-2909.133.1.1

Barrick, M. R., & Mount, M. K. (1991). The big five personality dimensions and job performance: A meta-analysis. *Personnel Psychology*, 44(1), 1-26. doi:10.1111/j.1744-6570.1991.tb00688.x

Baumeister, R. F., Bratslavsky, E., Finkenauer, C., & Vohs, K. D. (2001). Bad is stronger than good. *Review of General Psychology*, 5(4), 323-370. doi:10.1037/1089-2680.5.4.323

Beehr, T. A., Ragsdale, J. M., & Kochert, J. F. (2015). Effects of initial resources on the development of strains during a stressful training situation: Some counterintuitive results. *Journal of Organizational Behavior*, 36(4), 467-490. doi:10.1002/job.1974

Bentein, K., Vandenberghe, C., Vandenberg, R., & Stinglhamber, F. (2005). The role of change in the relationship between commitment and turnover: A latent growth modeling approach. *Journal of Applied Psychology*, 90(3), 468-482. doi:10.1037/0021-9010.90.3.468

Bliese, P. D., Adler, A. B., & Flynn, P. J. (2017). Transition processes: A review and synthesis integrating methods and theory. *Annual Review of Organizational Psychology and Organizational Behavior*, 4, 263-286. doi:10.1146/annurev-orgpsych-032516-113213

Bliese, P. D., Edwards, J. R., & Sonnentag, S. (2017). Stress and well-being at work: A century of empirical trends reflecting theoretical and societal influences. *Journal of Applied Psychology*, 102(3), 389-402. doi:10.1037/apl0000109

Bliese, P. D., & Ployhart, R. E. (2002). Growth modeling using random coefficient models: Model building, testing, and illustrations. *Organizational Research Methods*, 5(4), 362-387. doi:10.1177/109442802237116

Bliese, P. D., Schepker, D. J., Essman, S. M., & Ployhart, R. E. (2020). Bridging methodological divides between macro- and microresearch: Endogeneity and methods for panel data. *Journal of Management*, 46(1), 70-99. doi:10.1177/0149206319868016

Bliese, P. D., Thomas, J. L., McGurk, D., McBride, S., & Castro, C. A. (2011). Mental health advisory teams: a proactive examination of mental health during combat deployments. *International Review of Psychiatry*, 23(2), 127-134. doi:10.3109/09540261.2011.558834

Bliese, P. D., & Wang, M. (2020). Results provide information about cumulative probabilities of finding significance: Let's report this information. *Journal of Management*, 46(7), 1275-1288. doi:10.1177/0149206319886909.

Bonanno, G. A. (2004). Loss, trauma, and human resilience: Have we underestimated the human capacity to thrive after extremely aversive events?. *American psychologist*, 59(1), 20-28. doi:10.1037/0003-066X.59.1.20

Bonanno, G. A., Wortman, C. B., Lehman, D. R., Tweed, R. G., Haring, M., Sonnega, J.,… Nesse, R. M. (2002). Resilience to loss and chronic grief: A prospective study from preloss to 18-months postloss. *Journal of Personality and Social Psychology*, 83(5), 1150-1164. doi:10.1037/0022-3514.83.5.1150

Boswell, W. R., Boudreau, J. W., & Tichy, J. (2005). The relationship between employee job change and job satisfaction: the honeymoon-hangover effect. *Journal of Applied Psychology*, 90(5), 882-892. doi:10.1037/0021-9010.90.5.882

Boswell, W. R., Shipp, A. J., Payne, S. C., & Culbertson, S. S. (2009). Changes in newcomer job satisfaction over time: Examining the pattern of honeymoons and hangovers. *Journal of Applied Psychology*, *94*(4), 844-858. doi:10.1037/a0014975

Bowling, N. A., Beehr, T. A., Wagner, S. H., & Libkuman, T. M. (2005). Adaptation-level theory, opponent process theory, and dispositions: An integrated approach to the stability of job satisfaction. *Journal of Applied Psychology*, *90*(6), 1044-1053. doi:10.1037/0021-9010.90.6.1044

Boyes, M. E., & French, D. J. (2010). Neuroticism, stress, and coping in the context of an anagram-solving task. *Personality and Individual Differences*, *49*(5), 380-385. doi:10.1016/j.paid.2010.04.001

Cammann, C., Fichman, M., Jenkins, G. D., & Klesh, J. (1983). Michigan organizational assessment questionnaire. In S. E. Seashore, E. E. Lawyer, P. H. Mirvis, et al. (Eds), *Assessing organizational change: A guide to methods, measures, and practices* (pp. 71-138). New York, NY: Wiley-Interscience.

Chen, Y., McCabe, B., & Hyatt, D. (2017). Impact of individual resilience and safety climate on safety performance and psychological stress of construction workers: A case study of the Ontario construction industry. *Journal of Safety Research*, *61*, 167-176. doi:10.1016/j.jsr.2017.02.014

Chen, G., Ployhart, R. E., Thomas, H. C., Anderson, N., & Bliese, P. D. (2011). The power of momentum: A new model of dynamic relationships between job satisfaction change and turnover intentions. *Academy of Management Journal*, *54*(1), 159-181. doi:10.5465/amj.2011.59215089

Davies, S. E., Stoermer, S., & Froese, F. J. (2019). When the going gets tough: The influence of expatriate resilience and perceived organizational inclusion climate on work adjustment and turnover intentions. *The International Journal of Human Resource Management*, *30*(8), 1393-1417. doi:10.1080/09585192.2018.1528558

Deadrick, D. L., Bennett, N., & Russell, C. J. (1997). Using hierarchical linear modeling to examine dynamic performance criteria over time. *Journal of Management*, *23*(6), 745-757. doi:10.1177/014920639702300603

Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology*, *86*, 499-512. doi:10.1037/0021-9010.86.3.499

Diener, E, Lucas, RE, & Scollon, CN (2006). Beyond the hedonic treadmill: Revising the adaptation theory of well-being. *The American psychologist*, *61*(6), 305-314. doi:10.1037/0003-066X.61.4.305

Dienstbier, R. A. (1989). Arousal and physiological toughness: implications for mental and physical health. *Psychological Review*, *96*(1), 84-100. doi:10.1037/0033-295X.96.1.84

Duchek, S. (2020). Organizational resilience: a capability-based conceptualization. *Business Research*, *13*, 215-246. doi:10.1007/s40685-019-0085-7

Dunford, B. B., Shipp, A. J., Boss, R. W., Angermeier, I., & Boss, A. D. (2012). Is burnout static or dynamic? A career transition perspective of employee burnout trajectories. *Journal of Applied Psychology*, *97*(3), 637-650. doi:10.1037/a0027060

Finkel, E. J., Slotter, E. B., Luchies, L. B., Walton, G. M., & Gross, J. J. (2013). A brief intervention to promote conflict reappraisal preserves marital quality over time. *Psychological Science*, *24*(8), 1595-1601. doi:10.1177/0956797612474938

Fisher, D. M., Ragsdale, J. M., & Fisher, E. C. S. (2019). The importance of definitional and temporal issues in the study of resilience. *Applied Psychology*, *68*(4), 583-620. doi:10.1111/apps.12162

Galatzer-Levy, I. R., & Bonanno, G. A. (2012). Beyond normality in the study of bereavement: Heterogeneity in depression outcomes following loss in older adults. *Social Science & Medicine*, *74*(12), 1987-1994. doi:10.1016/j.socscimed.2012.02.022

Galatzer-Levy, I. R., & Bonanno, G. A. (2014). Optimism and death. *Psychological Science*, *25*(12), 2177-2188. doi:10.1177/0956797614551750

Galatzer-Levy, I. R., Huang, S. H., & Bonanno, G. A. (2018). Trajectories of resilience and dysfunction following potential trauma: A review and statistical evaluation. *Clinical Psychology Review*, *63*, 41-55. doi:10.1016/j.cpr.2018.05.008

Goldberg, L. R. (1992). The development of markers for the big-five factor structure. *Psychological Assessment*, *4*(1), 26-42. doi:10.1037/1040-3590.4.1.26

Halbesleben, J. R. B. (2006). Sources of social support and burnout: A meta-analytic test of the conservation of resources model. *Journal of Applied Psychology*, *91*(5), 1134-1145. doi:10.1037/0021-9010.91.5.1134

Halbesleben, J. R. B., Neveu, J.-P., Paustian-Underdahl, S. C., & Westman, M. (2014). Getting to the "COR". *Journal of Management*, *40*(5), 1334-1364.

Halbesleben, J. R. B., Wheeler, A. R., & Paustian-Underdahl, S. C. (2013). The impact of furloughs on emotional exhaustion, self-rated performance, and recovery experiences. *Journal of Applied Psychology*, *98*(3), 492-503. doi:10.1037/a0032242

Hartmann, S., Weiss, M., Newman, A., & Hoegl, M. (2020). Resilience in the workplace: A multilevel review and synthesis. *Applied Psychology*, *69*(3), 913-959. doi:10.1111/apps.12191

Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist*, *44*(3), 513-524. doi:10.1037/0003-066X.44.3.513

Hudgins, T. A. (2016). Resilience, job satisfaction and anticipated turnover in nurse leaders. *Journal of Nursing Management*, *24*(1), E62-E69. doi:10.1111/jonm.12289

Ibarra, H. (1999). Provisional selves: Experimenting with image and identity in professional adaptation. *Administrative Science Quarterly*, *44*(4), 764-791. doi:10.2307/2667055

Jansen, K. J., & Shipp, A. J. (2019). Fitting as a temporal sensemaking process: Shifting trajectories and stable themes. *Human Relations*, *72*(7), 1154-1186. doi:10.1177/0018726718794268

Jex, S. M., & Bliese, P. D. (1999). Efficacy beliefs as a moderator of the impact of work-related stressors: a multilevel study. *Journal of Applied Psychology*, *84*(3), 349-361. doi:10.1037/0021-9010.84.3.349

Jones, S. L., & Shah, P. P. (2016). Diagnosing the locus of trust: A temporal perspective for trustor, trustee, and dyadic influences on perceived trustworthiness. *Journal of Applied Psychology*, *101*(3), 392-414. doi:10.1037/apl0000041

Judge, T. A., Simon, L. S., Hurst, C., & Kelley, K. (2014). What I experienced yesterday is who I am today: Relationship of work motivations and behaviors to within-individual variation in the five-factor model of personality. *Journal of Applied Psychology*, *99*(2), 199-221. doi:10.1037/a0034485

Korsgaard, M. A., Kautz, J., Bliese, P., Samson, K., & Kostyszyn, P. (2018). Conceptualising time as a level of analysis: New directions in the analysis of trust dynamics. *Journal of Trust Research*, *8*(2), 142-165. doi:10.1080/21515581.2018.1516557.

Lance, C. E., Vandenberg, R. J., & Self, R. M. (2000). Latent growth models of individual change: The case of newcomer adjustment. *Organizational Behavior and Human Decision Processes*, *83*(1), 107-140. doi:10.1006/obhd.2000.2904

Larson, M., & Luthans, F. (2006). Potential added value of psychological capital in predicting work attitudes. *Journal of Leadership & Organizational Studies*, *13*(2), 75-92. doi:10.1177/10717919070130010701

Lee, R. T., & Ashforth, B. E. (1996). A meta-analytic examination of the correlates of the three dimensions of job burnout. *Journal of Applied Psychology*, *81*(2), 123-133. doi:10.1037/0021-9010.81.2.123

Linnenluecke, M. K. (2017). Resilience in business and management research: A review of influential publications and a research agenda. *International Journal of Management Reviews*, *19*(1), 4-30. doi:10.1111/ijmr.12076

Lucas, R. E. (2007). Adaptation and the set-point model of subjective well-being. *Current Directions in Psychological Science*, *16*(2), 75-79. doi:10.1111/j.1467-8721.2007.00479.x

Luthar, S. S., Cicchetti, D., & Becker, B. (2000). The construct of resilience: A critical evaluation and guidelines for future work. *Child Development*, *71*(3), 543-562. doi:10.1111/1467-8624.00164

Lyons, S. T., Schweitzer, L., & Ng, E. S. W. (2015). Resilience in the modern career. *Career Development International*, *20*(4), 363-383. doi:10.1108/CDI-02-2015-0024

Mache, S, Vitzthum, K, Wanke, E, David, A., Klapp, BF, & Danzer, G (2014). Exploring the impact of resilience, self-efficacy, optimism and organizational resources on work engagement. *Work (Reading, Mass.)*, *47*(4), 491-500. doi:10.3233/WOR-131617

Maslach, C., & Jackson, S. E. (1984). Burnout in organizational settings. *Applied Social Psychology Annual*, *5*, 133-153.

Maslach, C., Jackson, S. E., & Leiter, M. P. (1996). *Maslach burnout inventory: Manual* (3rd ed.). Palo Alto, CA: Consulting Psychologists Press.

Mathieu, J. E., & Zajac, D. M. (1990). A review and meta-analysis of the antecedents, correlates, and consequences of organizational commitment. *Psychological Bulletin*, *108*(2), 171-194. doi:10.1037/0033-2909.108.2.171.

McEwen, B. S. (1998). Stress, adaptation, and disease: Allostasis and allostatic load. *Annals of the New York Academy of Sciences*, *840*(1), 33-44. doi:10.1111/j.1749-6632.1998.tb09546.x

Meichenbaum, D. (1985). Stress inoculation training,. In W. O'Donohue, J .E. Fisher, & S. C. Hayes (Eds), *Cognitive behavioral therapy: Applying empirically supported techniques in your practice* (pp. 407-410). New York, NY: Wiley.

Meng, H., Luo, Y., Huang, L., Wen, J., Ma, J., & Xi, J. (2019). On the relationships of resilience with organizational commitment and burnout: A social exchange perspective. *The International Journal of Human Resource Management*, *30*(15), 2231-2250. doi:10.1080/09585192.2017.1381136

Meyer, J. P., Stanley, D. J., Herscovitch, L., & Topolnytsky, L. (2002). Affective, continuance, and normative commitment to the organization: A meta-analysis of antecedents, correlates, and consequences. *Journal of Vocational Behavior*, *61*(1), 20-52. doi:10.1006/jvbe.2001.1842

Mishra, P., & McDonald, K. (2017). Career resilience: An integrated review of the empirical literature. *Human Resource Development Review*, *16*(3), 207-234. doi:10.1177/1534484317719622

Mobley, W. H., Griffeth, R. W., Hand, H. H., & Meglino, B. M. (1979). Review and conceptual analysis of the employee turnover process. *Psychological Bulletin*, *86*(3), 493-522. doi:10.1037/0033-2909.86.3.493

Morrison, E. W., & Robinson, S. L. (1997). When employees feel betrayed: A model of how psychological contract violation develops. *Academy of Management Review*, *22*(1), 226-256. doi:10.5465/amr.1997.9707180265

Murnighan, J. K., & Conlon, D. E. (1991). The dynamics of intense work groups: A study of British string quartets. *Administrative Science Quarterly*, *36*(2), 165-186. doi:10.2307/2393352

Neff, L. A., & Broady, E. F. (2011). Stress resilience in early marriage: Can practice make perfect?. *Journal of Personality and Social Psychology*, *101*(5), 1050-1067. doi:10.1037/a0023809

Oshio, A., Taku, K., Hirano, M., & Saeed, G. (2018). Resilience and Big Five personality traits: A meta-analysis. *Personality and Individual Differences*, *127*, 54-60.

Pool, E., Brosch, T., Delplanque, S., & Sander, D. (2016). Attentional bias for positive emotional stimuli: A meta-analytic investigation. *Psychological Bulletin*, *142*(1), 79-106. doi:10.1037/bul0000026

Pulakos, E. D., Schmitt, N., Dorsey, D. W., Arad, S., Borman, W. C., & Hedge, J. W. (2002). Predicting adaptive performance: Further tests of a model of adaptability. *Human Performance*, *15*(4), 299-323. doi:10.1207/S15327043HUP1504_01

Roe, R. A. (2008). Time in Applied Psychology. *European Psychologist*, *13*(1), 37-52. doi:10.1027/1016-9040.13.1.37

Rosen, C. C., Chang, C.-H., Johnson, R. E., & Levy, P. E. (2009). Perceptions of the organizational context and psychological contract breach: Assessing competing perspectives. *Organizational Behavior and Human Decision Processes*, *108*(2), 202-217. doi:10.1016/j.obhdp.2008.07.003

Schaufeli, W. B., Bakker, A. B., & Van Rhenen, W. (2009). How changes in job demands and resources predict burnout, work engagement, and sickness absenteeism. *Journal of Organizational Behavior*, *30*, 893-917. doi:10.1002/job.595

Seery, M. D., Leo, R. J., Lupien, S. P., Kondrak, C. L., & Almonte, J. L. (2013). An upside to adversity?. *Psychological Science*, *24*(7), 1181-1189. doi:10.1177/0956797612469210

Shatté, A., Perlman, A., Smith, B., & Lynch, W. D. (2017). The positive effect of resilience on stress and business outcomes in difficult work environments. *Journal of Occupational & Environmental Medicine*, 59(2), 135-140. doi:10.1097/JOM.0000000000000914

Shin, J., Taylor, M. S., & Seo, M.-G. (2012). Resources for change: The relationships of organizational inducements and psychological resilience to employees' attitudes and behaviors toward organizational change. *Academy of Management Journal*, 55(3), 727-748. doi:10.5465/amj.2010.0325

Shipp, A. J., Edwards, J. R., & Lambert, L. S. (2009). Conceptualization and measurement of temporal focus: The subjective experience of the past, present, and future. *Organizational Behavior and Human Decision Processes*, 110(1), 1-22. doi:10.1016/j.obhdp.2009.05.001

Singer, J. D., & Willett, J. B. (2003). *Applied longitudinal data analysis: Modeling change and event occurrence*. Oxford: Oxford University Press.

Stoverink, A. C., Kirkman, B. L., Mistry, S., & Rosen, B. (2020). Bouncing back together: Toward a theoretical model of work team resilience. *Academy of Management Review*, 45(2), 395-422. doi:10.5465/amr.2017.0005

Tesluk, P. E., & Jacobs, R. R. (1998). Toward an integrated model of work experience. *Personnel Psychology*, 51(2), 321-355. doi:10.1111/j.1744-6570.1998.tb00728.x

Tett, R. P., & Meyer, J. P. (1993). Job satisfaction, organizational commitment, turnover intention, and turnover: path analyses based on meta-analytic findings. *Personnel psychology*, 46(2), 259-293. doi:10.1111/j.1744-6570.1993.tb00874.x

Tingley, D, Yamamoto, T, Hirose, K, Keele, L, & Imai, K (2014). mediation: R Package for Causal Mediation Analysis. *Journal of Statistical Software*, 59(5), 1-38. Retrived from http://www.jstatsoft.org/v59/i05/.

Tubbert, S. J. (2016). Resiliency in emergency nurses. *Journal of emergency nursing*, 42(1), 47-52. doi:10.1016/j.jen.2015.05.016

Vandenberghe, C., Bentein, K., & Panaccio, A. (2017). Affective commitment to organizations and supervisors and turnover: A role theory perspective. *Journal of Management*, 43(7), 2090-2117. doi:10.1177/0149206314559779

Vanhove, A. J., Herian, M. N., Perez, A. L. U., Harms, P. D., & Lester, P. B. (2016). Can resilience be developed at work? A meta-analytic review of resilience-building programme effectiveness. *Journal of Occupational and Organizational Psychology*, 89(2), 278-307. doi:10.1111/joop.12123

Viswesvaran, C., Sanchez, J. I., & Fisher, J. (1999). The role of social support in the process of work stress: A meta-analysis. *Journal of Vocational Behavior*, 54(2), 314-334.

Walton, G. M. (2014). The new science of wise psychological interventions. *Current Directions in Psychological Science*, 23(1), 73-82. doi:10.1177/0963721413512856

Wanous, J. P., Reichers, A. E., & Hudy, M. J. (1997). Overall job satisfaction: How good are single-item measures?. *Journal of Applied Psychology*, 82(2), 247-252. doi:10.1037/0021-9010.82.2.247

Westman, M., & Eden, D. (1997). Effects of a respite from work on burnout: vacation relief and fade-out. *Journal of Applied Psychology, 82*(4), 516-527. doi:10.1037/0021-9010.82.4.516

Wright, T. A., & Cropanzano, R. (1998). Emotional exhaustion as a predictor of job performance and voluntary turnover. *Journal of Applied Psychology, 83*(3), 486-493. doi:10.1037/0021-9010.83.3.486

Youssef, C. M., & Luthans, F. (2007). Positive organizational behavior in the workplace. *Journal of Management, 33*(5), 774-800. doi:10.1177/0149206307305562

Author Biographies

Patrick J. Flynn is Assistant Professor of Human Resource Management in the Department of Management, Innovation, and Entrepreneurship at the Poole College of Management, North Carolina State University. He received a Ph.D. from the University of South Carolina and a B.S. from the University of Maryland. His research is focused on theory, design, and analysis of dynamic individual and group level processes, including the process of adaptation and emergence in teams.

Paul D. Bliese is the Jeff B. Bates Chaired Professor in the Department of Management at the Darla Moore School of Business. He received a Ph.D. from Texas Tech University and a B.A. from Texas Lutheran University. After graduate school, he worked for 22 years at the Walter Reed Army Institute of Research. Throughout his career, Dr. Bliese has led efforts to use statistical methods to answer complex organizational problems and advance theory and practice.

M. Audrey Korsgaard is Professor in the Management Department and director of the Riegel and Emory Human Resources Research Center at the Darla Moore School of Business, University of South Carolina. She received a Ph.D. from New York University. She studies values, cooperation and trust dynamics in a variety of leadership, interpersonal and team settings.

Cormac Cannon is Associate Professor and Director of Bands at the University of South Carolina. He previously served on the faculty of Michigan State University and holds degrees from the University of Iowa, the University of Cincinnati College-Conservatory of Music, and the University of Texas at Austin.