ORIGINAL ARTICLE

Positive event diversity: Relationship with personality and well-being

Patrick Klaiber[1,2] | Patrick L. Hill[3] | David M. Almeida[4] | Anita DeLongis[1] |
Nancy L. Sin[1]

[1]Department of Psychology, University of British Columbia, Vancouver, British Columbia, Canada

[2]Department of Developmental Psychology, Tilburg University, Tilburg, The Netherlands

[3]Department of Psychological and Brain Sciences, Washington University, Saint Louis, Missouri, USA

[4]Department of Human Development and Family Studies, Pennsylvania State University, University Park, Pennsylvania, USA

Correspondence
Patrick Klaiber, Department of Developmental Psychology, Tilburg University, Warandelaan 2, 5037 AB Tilburg, The Netherlands.
Email: p.d.klaiber@tilburguniversity.edu

Funding information
Studienstiftung des Deutschen Volkes; National Institute of Aging, Grant/Award Number: R01-AG19239 and P01-AG020166; Michael Smith Health Research BC, Grant/Award Number: SCH-2020-0590; Social Sciences and Humanities Research Council of Canada, Grant/Award Number: 430-2019-00387

Abstract

Objective: Examining the personality and well-being correlates of positive event diversity.

Background: Past research has highlighted that personality traits are linked to the frequency of daily positive events. This study is the first to examine *positive event diversity*, the extent to which positive events are spread across multiple types of positive life domains, as well as its personality and well-being correlates.

Method: We conducted parallel analyses of three daily diary datasets ($Ns = 1919$, 744, and 1392) that included evening assessment of daily positive events and affective well-being. The Big Five personality traits were assessed in baseline surveys.

Results: Positive Event Diversity was related to higher person-mean daily positive affect but not negative affect. Higher Extraversion, Agreeableness, Openness, and lower Neuroticism were correlated with more positive event diversity. These associations became nonsignificant when controlling for positive event frequency. Positive event frequency moderated the link between positive event diversity and person-mean affect, such that higher positive event diversity was associated with higher negative and lower positive affect for people who experienced more frequent positive events.

Conclusions: No consistent evidence was found for personality as a moderator of the positive event diversity–well-being link across the three studies. Further, the well-being implications of positive event diversity may be better understood when interpreting them alongside indexes of positive event frequency.

KEYWORDS
negative affect, openness, positive affect, uplifts

1 | INTRODUCTION

To gain a deeper understanding of how daily life influences long-term health and well-being, recent research

has shifted its focus from solely examining the frequency of specific psychological experiences, such as stressors and emotions. Instead, scholars have underscored the significance of considering the diversity of daily events,

activities, and emotions that are unique to a person's daily life (Benson et al., 2018). This shift has been partly inspired by work in ecology which emphasizes that understanding the health of an environment goes beyond counting organisms and rather involves considering the diversity of organisms that make up an interactive system (Magurran, 1988; Tansley, 1935).

A prime example is the concept of *stressor diversity* in daily life, defined as the extent to which people experience their daily stressors across different categories, such as arguments, work stressors, and family stressors. People with low diversity in their stressor types tend to have poorer affective well-being compared to people with stressors spread across different categories (Koffer et al., 2016). The authors speculated that low stressor diversity likely indicated that the same stressors had occurred repeatedly, and that this chronicity of similar stressors can be detrimental to well-being. A different study found that greater diversity of engagement in different daily life activities—such as household chores, physical activity, paid work—was related to higher eudaimonic well-being (e.g., purpose, mastery) in older adults but lower well-being in younger adults (Lee et al., 2018). This diversity of activities may reflect the strain of many obligatory roles among younger adults, whereas it may be an indicator of social integration in older adults (Lee et al., 2018). Importantly, this study did not show significant links between activity diversity and positive or negative affect; thus, it remains unclear whether the diversity of daily positive experiences is related to daily affect.

Relatedly, some work has connected higher emodiversity (i.e., the capacity to experience a wide number of distinct emotions such as *joy, calm*, and *excitement*) with better indicators of health and well-being, including lower depressive symptoms, fewer doctor visits (Quoidbach et al., 2014), fewer physical symptoms (Urban-Wojcik et al., 2022), as well as lower circulating levels of inflammation (Ong et al., 2018). Importantly, emodiversity can account for variance in these health outcomes over and above a person's average levels of positive and negative emotions. This past work, however, does not emphasize the context—such as events and activities—that gives rise to the diversity of emotions.

1.1 | Daily positive events and positive event diversity

Daily positive events (e.g., having a pleasant conversation, spending time in nature, and engaging in a recreational activity) are important aspects of daily life but have received less empirical attention, compared to negative events such as daily hassles and stressors (Klaiber et al., in preparation; Sin et al., 2015). While past research has examined linkages of daily social interactions with health

and well-being (e.g., Sun et al., 2020), research on positive or pleasant events that are often nonsocial has been more scarce. Daily diary studies have found that, on average, people report a positive (i.e., favorable or desirable) event on most days (Sin & Almeida, 2018). Unlike internal states or thoughts, positive events are external to a person and reflect transactions between the person and their environment (Sin et al., 2015; Zautra et al., 2005). These events usually result in increased positive affect on days when they occur (Zautra et al., 2005).

This article aims to introduce *positive event diversity* as a novel metric that indicates the extent to which positive events are spread across different event types, such as positive work events, spending time in nature, and positive social interactions. For example, a person with low positive event diversity might report five positive events in a given week, but all of them at work. On the other hand, a person with high positive event diversity might also report five positive events, yet these events are spread across a variety of domains such as work, home, relationships, and nature. In particular, we are interested in exploring both the personality and well-being correlates of experiencing a wide range of different positive event types in daily life.

1.2 | Personality traits as predictors of positive event diversity

The first aim of this article is to locate positive event diversity within the plane of individual differences, specifically the Big Five personality traits. We and others have previously shown that personality traits predict exposure to and the affective correlates of daily positive events (Hart & Wearing, 1995; Klaiber et al., 2022; Zautra et al., 2005). Among the Big Five traits, Extraversion and Openness to Experience in particular predicted a greater likelihood of experiencing positive events, perhaps due to these traits' agentic components (de Vries et al., 2016; Klaiber et al., 2022). It is not clear, however, whether these traits would also predict a greater diversity of positive events across different types of positive events.

Openness to Experience (or Openness, for short) describes the "breadth, depth, originality, and complexity of an individual's mental and experiential life" (John et al., 2008, p. 220). Openness reflects a need for intellectual stimulation and exposure to novel situations (Costa Jr. & McCrae, 2008). While Openness has long been thought of as an intrapsychic trait that mostly captures differences in active imagination, aesthetic sensitivity, and intellectual curiosity, the trait also has important implications for how people interact with their environment.

One core facet of Openness is *Preference for Variety* (also called *Adventurousness*; Costa & McCrae, 1992;

Soto & John, 2009), which describes a preference for novel and intense experiences. This preference has been shown to translate into more diverse interests and activities in daily life. For example, people with high Openness prefer a variety of different musical forms and genres (Dollinger, 1993; Greenberg et al., 2016), and are more open to becoming friends with people outside their own racial group (Antonoplis & John, 2022). In addition, Openness has been linked to a greater diversity of daily activities (Jackson et al., 2020) and specifically a greater engagement in cultural activities that require the processing of novel ideas, such as going to the opera or a modern art gallery (Schwaba et al., 2018). Finally, people higher in Openness had more diverse interests as indicated by their Facebook likes, and they engaged in more diverse events based on their phone's GPS data (Matz, 2021). Given that both theoretical and empirical investigations suggest that Openness is linked to more diverse interests and activities, we hypothesized that people higher in Openness would experience more diverse positive events in their daily lives.

While Openness is characterized by a need for diverse experiences, Extraversion is mostly characterized by a need for social stimulation (Lee & Ashton, 2006). Thus, people higher in Extraversion tend to have large social networks and more social interactions (Lucas et al., 2008; Srivastava et al., 2008). As Extraversion has a substantial agentic component (i.e., *assertiveness*; de Vries et al., 2016), it is not surprising that people higher in Extraversion frequently seek out and create more positive events (Hart & Wearing, 1995; Klaiber et al., 2022; Zautra et al., 2005). The majority of these positive events are likely to consist of positive social interactions instead of other positive event types, such as spending time in nature, visiting an art gallery, or meditating. Indeed, there is little evidence that Extraversion is associated with a greater diversity of interests or experiences (Dollinger, 1993; Matz, 2021). However, a recent experience sampling study found evidence that state expressions of Extraversion were linked to a greater variety of places visited at both within- and between-person levels (Lindner et al., 2023). Taking this together, we expect people with higher Extraversion to engage in more positive events, but these events were expected to cluster in the positive social interaction category. In other words, we hypothesize that Extraversion would be related to lower positive event diversity.

In this research, we primarily focus on Extraversion and Openness as the two key personality dimensions that have been linked to daily positive events in past research (Klaiber et al., 2022; Zautra et al., 2005). However, past work has also connected the other Big Five traits (e.g., Agreeableness, Conscientiousness) to different aspects of positive events such as the emotions experienced during positive events (Klaiber et al., 2022). Thus, on an exploratory basis, we include all Big Five traits in our analyses.

H1a. Openness to Experience will predict greater positive event diversity.

H1b. Extraversion will predict lower positive event diversity.

1.3 | Positive event diversity and affective well-being

Although experiencing more positive events can provide benefits for well-being (Klaiber et al., 2021; Zautra et al., 2005), it might also be favorable to experience daily positive events spread across different event types. Experiencing different types of positive events might provide benefits across different domains of a person's life by fulfilling a diverse set of needs. For example, various daily positive events such as engaging in a positive social interaction, achieving a milestone at work, or being engrossed in a hobby might be driven by distinct sets of emotional, social, and cognitive needs and collectively can contribute to greater well-being.

These ideas are in line with theories on multiple social roles and role accumulation. Occupying multiple social roles can provide purpose, meaning, guidance, and direction to one's life, and thus, foster psychological well-being (Thoits, 1983). It may be that experiencing positive events in diverse contexts is one way through which role accumulation can contribute to psychological well-being. It should be noted, however, that occupying multiple social roles can also lead to role strain and greater stress (Sieber, 1974). Therefore, experiencing many positive events in diverse contexts may also contribute to greater daily life strain. For instance, a person who juggles many positive events in very different life domains may be stretched in terms of time, cognitive (e.g., attention, planning), or social resources. Thus, positive event diversity may be less beneficial for a person experiencing a high frequency of positive events. This idea is partly derived from research on stressor diversity, which suggests that stressor diversity is only associated with greater negative affect in people who experience stressors relatively frequently but unrelated to daily affective well-being in people who experience few daily stressors (Koffer et al., 2016). Thus, in addition to examining the well-being correlates of positive event diversity, we also evaluated on an exploratory basis whether the frequency of positive events may moderate the relationship between positive event diversity and daily affective well-being.

H2. People with greater positive event diversity will have better daily affective well-being, as indicated by higher person-mean

daily positive affect and lower negative affect.

Exploratory Research Question: Positive event frequency will be evaluated as a moderator of this relationship.

1.4 | Personality as a moderator of the link between positive event diversity and well-being

Although work has examined personality as a predictor of activity or event diversity (Jackson et al., 2020; Matz, 2021), there is no research to date on whether personality may play a moderating role in the relationship between daily life diversity and well-being. It may be that positive event diversity is only linked to better well-being among people with certain personality traits. For example, given that a key facet of Openness is the need for variety (*Adventurousness*; Costa & McCrae, 1992), we propose that this need for variety may prompt people higher in Openness to be relatively more receptive to experiencing positive events across different positive event types, as opposed to the same type of positive event happening repeatedly. Each new positive event of a different type may provide the opportunity to engage with novel information and different contextual features, thus making these events more appealing to people with high levels of Openness. Thus, we expect that the link between positive event diversity and daily well-being will be augmented in people higher in Openness and attenuated in people lower in Openness.

H3. Openness to Experience will moderate the link between positive event diversity and daily affective well-being, such that higher levels of Openness will predict stronger links whereas lower Openness will predict weaker associations.

2 | METHODS

To examine the relationships of positive event diversity with affective well-being and personality traits, we used data from three daily diary studies. Specifically, two independent samples came from the National Study of Daily Experiences (NSDE; second wave and Refresher sample; Ryff et al., 2017; Ryff & Almeida, 2017) and one sample came from the Coping with the COVID-19 Outbreak Study (COVID-19 study; Klaiber et al., 2021; Zheng et al., 2021).

We present brief descriptions of the samples and procedures below. Demographic and descriptive statistics of the main variables can be found in Table 1.

This project was approved by the UBC Behavioral Research Ethics Board, certificate numbers H19-03082 and H19-03082. The NSDE data are publicly available, and data collection was originally approved by research ethics boards at the study sites, including the University of Wisconsin, Madison, and The Pennsylvania State University.

2.1 | National Study of Daily Experiences

Data were drawn from the second wave of the National Study of Daily Experiences (NSDE 2) and the Refresher sample (NSDE Refresher). Both samples are part of the larger Midlife in the United States Study (MIDUS). The second wave consisted of 2022 individuals who were randomly drawn from the MIDUS 2 sample (5555 adults, ages 35–85 years), whereas the Refresher sample consisted of 782 individuals who were randomly drawn from the MIDUS Refresher sample (3577 adults, ages 25–75 years). Personality and demographic data was obtained from a questionnaire administered approximately 1–2 years before the daily diary period. In both samples, participants took part in eight consecutive days of semistructured nightly telephone interviews that asked about their daily positive events and affect. For the present analyses, the NSDE 2 sample consisted of 1919 participants, and the NSDE Refresher sample of 744 participants after excluding people who completed fewer than four daily diaries or who had missing values on key analytical variables.

2.2 | Coping with the COVID-19 Outbreak Study

We used daily diary data from the Coping with the COVID-19 Outbreak Study (Klaiber et al., 2021), collected between March and August 2020 to examine daily life experiences during the initial period of the COVID-19 pandemic. We combined data from the community sample ($n = 1206$) that was recruited through coverage in news and social media and ads distributed to community organizations, with data from a student sample ($n = 414$) that was recruited through a human subject pool at a public university in Canada. Participants first completed a baseline survey that assessed demographics, personality, and other psychosocial measures. Subsequently, they were invited to enroll in a daily diary substudy. During the daily diary period,

TABLE 1 Means, SDs, and relative frequencies of analytic variables.

	NSDE 2 (N = 1919)	NSDE Refresher (N = 744)	COVID-19 study (N = 1392)
Variables	**M (SD)**		
PE frequency	1.03 (0.63)	1.26 (0.70)	2.23 (1.16)
PE diversity	0.49 (0.30)	0.54 (0.22)	0.66 (0.20)
Positive affect	2.72 (0.71)	2.52 (0.75)	45.85 (18.20)
Negative affect	0.21 (0.27)	0.22 (0.27)	26.16 (15.44)
Extraversion	3.14 (0.57)	3.06 (0.59)	3.17 (0.92)
Agreeableness	3.45 (0.49)	3.36 (0.53)	3.54 (0.71)
Conscientiousness	3.38 (0.45)	3.35 (0.50)	3.63 (0.83)
Neuroticism	2.04 (0.63)	2.14 (0.69)	3.13 (0.96)
Openness	2.94 (0.53)	2.92 (0.53)	3.65 (0.85)
Age	56.29 (12.15)	48.19 (12.63)	39.59 (17.67)
	Rel. frequency (%)		
Gender (woman)	57.9%	55.4%	83.5%
Education (college degree or higher)	38.7%	50.4%	55.0%
Racial minorities versus White participants	15.1%	15.4%	25.6%
Community sample versus Student sample	–	–	74.3%

Note: Positive event (PE) frequency could range from 0 to 5 for NSDE 2, from 0 to 6 for NSDE Refresher, and from 0 to 7 for the COVID-19 study. Positive event (PE) diversity could range from 0 to 1 for all datasets. Positive and negative affect could range from 0 to 4 in the NSDE studies and from 0 to 100 in the COVID-19 study. The personality scales could range from 1 to 4 for the NSDE datasets and from 1 to 5 for the COVID-19 study.

participants received email prompts at 7 p.m. local time for seven consecutive days to complete the online surveys via the Qualtrics platform. These nightly surveys asked about their daily positive events and affect. The analytic sample for the COVID-19 study consisted of 1393 people who completed at least four of the seven daily surveys and who did not have missing values for any key analytical variables.

2.3 | Measures

2.3.1 | Big Five personality

NSDE 2 and Refresher
In both NSDE 2 and Refresher, the Midlife Development Inventory Personality Scale was administered to assess the Big Five Personality traits (Lachman & Weaver, 1997). Each factor was assessed with four to seven items: Extraversion (e.g., *outgoing, friendly, lively*), Agreeableness (e.g., *helpful, warm, caring*), Conscientiousness (e.g., *organized, responsible, hardworking*), Neuroticism (e.g., *moody, worrying, nervous*), and Openness to Experience (e.g., *creative, intelligent, curious*). Using a scale from 1

(*a lot*) to 4 (*not at all*), participants rated how well each of these adjectives described them. Items were reverse-scored and averaged, such that higher values indicated a higher manifestation of a given personality trait. Internal consistencies based on McDonald's ω (Hayes & Coutts, 2020) were satisfactory and ranged from 0.74 to 0.82 (see Klaiber et al., 2022).

COVID-19 study
The Coping with the COVID-19 Study used a 10-item version of the Big Five Inventory (BFI-10; Rammstedt & John, 2007) to assess the Big Five Personality traits. This measure was chosen to lower participant burden and maximize retention during the COVID-19 pandemic. Participants rated how well each of 10 statements described them on a scale from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*). Internal consistencies were low because each of the Big Five traits was only represented by two items. In our sample, alphas ranged from 0.33 for Agreeableness to 0.67 for Extraversion. Sufficient reliability has been shown through high retest correlations and validity through part-whole correlations with the BFI-44 scales in validation studies (Rammstedt & John, 2007).

2.3.2 | Daily affect

NSDE 2 and Refresher
In both NSDE 2 and the Refresher samples, positive and negative affect were measured using scales developed for MIDUS (Kessler et al., 2002; Mroczek & Kolarz, 1998). Participants indicated how often they had experienced the listed emotions that day, using a rating scale from 0 (none of the time) to 4 (all of the time). Thirteen items were used to assess positive affect (*in good spirits, cheerful, extremely happy, calm and peaceful, satisfied, full of life, close to others, like you belong, enthusiastic, attentive, proud, active,* and *confident*), and 14 items for negative affect (*restless or fidgety, nervous, worthless, so sad nothing could cheer you up, everything was an effort, hopeless, lonely, afraid, jittery, irritable, ashamed, upset, angry,* and *frustrated*). For positive affect, we decided to include interpersonally oriented items such as close to others or like you belong, as they have been shown to be an integral part of the emotional lives of older adults (Charles et al., 2019). The reliability of between-person differences was excellent ($R > 0.97$; Scott et al., 2018).

COVID-19 study
The COVID-19 study assessed positive and negative affect with a modified version of the PANAS-X (Watson & Clark, 1999), designed to capture intra- and interindividual variability in emotions across different adult age groups (Charles et al., 2019). Participants were asked how well each of a list of emotions described how they had felt that day. Participants made their ratings using a slider with anchors at 0 = *not at all* and 100 = *extremely*. Positive affect was assessed using nine items (*enthusiastic, happy, satisfied, confident, calm, like you belong, close to others, proud,* and *full of life*) and negative affect with seven items (*anxious, sad, angry, frustrated, disgusted, lonely,* and *ashamed*). Between-person reliabilities were excellent for both positive and negative affect ($R > 0.98$; Klaiber et al., 2021).

2.3.3 | Daily positive events

Positive events were assessed in all studies using an adapted version of the Daily Inventory of Stressful Events (DISE; Almeida et al., 2002). In the NSDE, every evening, participants were asked whether any positive events had occurred in each of the following five categories: *positive social interaction; positive event at work, school, or volunteer position; positive event at home; positive event that happened to a close friend or family member;* and *other positive event.* NSDE Refresher and the COVID-19 study included an additional item inquiring whether the participant had spent any time that day *enjoying or viewing nature.* Participants responded "yes" or "no" for each category. They were instructed to report each positive event only once, in the category that best described their event. Due to physical distancing restrictions in the spring and summer of 2020, the COVID-19 study also differentiated between positive social interactions that happened in person versus those that happened remotely. These categories were chosen to cover different life domains (e.g., work events, events at home) and positive event types (e.g., spending time in nature, social interactions, and network events). Thus, positive events were assessed with five categories in NSDE 2, six categories in NSDE Refresher, and seven categories in the COVID-19 study. Positive event frequency was calculated by taking the average number of positive events a person reported on a given day. Because participants only reported whether any event in a given category occurred at all, rather than the number of such events, scores for positive event frequency ranged from 0 to the number of categories assessed in each study. The DISE has been previously used to examine the well-being correlates of stressor diversity (Koffer et al., 2016).

2.3.4 | Positive event diversity

Shannon's entropy was used to compute a measure of positive event diversity, analogous to the procedures for computing stressor diversity outlined by Koffer et al. (2016). This index provides a measure of whether the different positive event types were endorsed evenly by the participants in their daily surveys.

$$\text{Positive Event Diversity} = -\left(\frac{1}{\ln(m)}\right)\sum_{j=1}^{m} p_{ij} \ln p_{ij}$$

i = individuals; j = positive event types; m = number of available positive event categories (i.e., 5–7); p_{ij} = proportion of individual's i's positive events that were in each category, $j = 1$ to m.

Scores can range from 0 (no positive event diversity: All positive events in only one category, or no positive events endorsed) to 1 (maximum positive event diversity: Positive events evenly dispersed across all positive event types). Because the diversity index is standardized by the number of positive event types assessed in each study, scores from different datasets with a different number of positive event types are comparable.

For sensitivity, we also used the number of unique positive event categories endorsed throughout the study week as an alternative indicator of positive event diversity. This indicator closely resembles the richness of positive events

(i.e., the number of different positive event types available to an individual; Quoidbach et al., 2018). The results using this index were consistent with the results obtained using Shannon's entropy and we proceed only reporting the results based on entropy.

2.4 | Data analysis

Parallel analyses were conducted in each dataset and results were synthesized with random effects meta-analyses using the metafor package in R (Viechtbauer, 2010). Regression coefficients were meta-analyzed as partial correlation coefficients using procedures outlined by Aloe (2014). We decided to use meta-analytical procedures instead of combining the data from the different sources in a single model, as different scales were used and the data were collected at different historic times. Daily positive and negative affect were computed for each person on each day by taking the mean of the items. The person-means of the daily affect scores were used in the models of interest as an indicator of daily affective well-being. Similarly, the daily average number of positive events reported by a person was used as a measure of positive event frequency. We used ordinary least squares regression to test our hypotheses. All continuous variables were centered on grand means to enable the interpretation of the intercept and main effects of models that included interaction terms.

To examine Hypothesis 1, we tested the Big Five traits as predictors of positive event diversity in a single model to account for the covariation of the Big Five traits and demographic covariates. Hypotheses 2 and 3 were evaluated in the same models, with separate models computed for positive and negative affect as the outcome. These models included positive event diversity, positive event frequency, all Big Five traits, and covariates as predictors, in addition to interaction terms between positive event diversity and all the Big Five traits. The aim of these models was to evaluate whether the link between positive event diversity and affective well-being differed depending on the Big Five traits. To examine Hypothesis 2 concerning the well-being implications of positive event diversity, the main effect of positive event diversity (controlling for the other predictors in the model) was evaluated. The model also included an interaction term between positive event diversity and positive event frequency to examine whether the well-being implication of positive event diversity differed based on the frequency that a person experiences positive events. To examine Hypothesis 3 concerning the moderation of the diversity–well-being link by the Big Five personality traits, the interaction terms between positive events

diversity and the Big Five traits were evaluated. We also ran sensitivity analyses controlling for negative affect in models predicting positive affect, and vice versa. The results were similar, so we present the results from the parsimonious models without controlling for the other valence of affect. All analyses covaried for positive event frequency, age, education ($0 =$ no college degree, $1 =$ college degree or higher), and gender ($0 =$ men, $1 =$ women). In analyses for the COVID-19 study, we also covaried for "other gender" (vs men) and for the student versus community-based subsamples.

Finally, as sensitivity analyses, we conducted models that added our predictors of interest in stepwise models. After adding our main predictor of interest (i.e., personality trait for H1, and positive event diversity for H2), we added positive event frequency, demographic controls, and the remaining Big Five traits in successive models to evaluate at which point zero-order correlations became nonsignificant. These models are presented in the supplementary online materials.

2.5 | Transparency and Openness

The analyses and hypotheses were preregistered on the Open Science Framework.[1] We initially only preregistered analyses on the COVID-19 study, but then decided to include parallel analyses with the NSDE 2 and Refresher samples to ensure that our results were not driven by the pandemic context. In addition, the analyses examining the interaction between frequency and diversity were not preregistered and need to be evaluated as exploratory. Data for the NSDE and MIDUS samples can be accessed through the Inter-university Consortium for Political and Social Research[2] and the aggregated data for the COVID-19 study, alongside the analytical code is available on the Open Science Framework (Klaiber et al., 2023). Power analyses suggest that we had >90% power in our smallest sample to detect small effect sizes of $r = 0.1$.

3 | RESULTS

Descriptive statistics for the main variables of all three samples can be found in Table 1. Across the three samples, on average, participants reported between one and two positive events per day. The grand mean for positive event diversity was slightly above 0.5 (range $= 0–1$), suggesting that positive events were dispersed near the scale midpoint between no dispersion to absolute dispersion. Across the three samples, on average, individuals reported at least 3–4 different types of positive events across the week-long diary period. Table 2 shows zero-order correlations

TABLE 2 Zero-order correlations of study variables with positive event diversity.

Variables	NSDE 2 (N = 1919)	NSDE Refresher (N = 744)	COVID-19 study (N = 1392)	Meta-analyzed across three studies
Positive event frequency	0.75***	0.71***	0.74***	$r = 0.73$; 95% CI = [0.72; 0.74]
Positive affect	0.08***	0.12***	0.41***	$r = 0.20$; 95% CI = [0.00; 0.41]
Negative affect	0.01	0.09*	−0.19***	$r = -0.03$; 95% CI = [−0.19; 0.13]
Extraversion	0.14***	0.20***	0.13***	$r = 0.15$; 95% CI = [0.12; 0.18]
Agreeableness	0.10***	0.15***	0.08**	$r = 0.10$; 95% CI = [0.07; 0.13]
Conscientiousness	0.05*	0.06	0.25***	$r = 0.12$; 95% CI = [−0.01; 0.25]
Neuroticism	−0.08***	−0.05	−0.13***	$r = -0.09$; 95% CI = [−0.13; −0.05]
Openness	0.19***	0.19***	0.07**	$r = 0.15$; 95% CI = [0.07; 0.22]

Note: Random effect meta-analyses were conducted to synthesize the correlations from the three different datasets.

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

TABLE 3 Regression results of the Big Five personality traits predicting positive event diversity.

Variables	NSDE 2 (N = 1919) b (SE)	β	NSDE Refresher (N = 744) b (SE)	β	COVID-19 study (N = 1392) b (SE)	β	Meta-analytical estimate Partial r (SE)
Intercept	0.50 (0.02)***		0.54 (0.01)***		0.67 (0.02)***		
Extraversion	0.01 (0.01)	0.01	0.01 (0.01)	0.04	0.00 (0.00)	0.00	0.01 (0.02)
Agreeableness	0.02 (0.01)	0.03	0.01 (0.01)	0.01	0.00 (0.01)	0.01	0.02 (0.02)
Conscientiousness	−0.02 (0.01)*	−0.03	−0.01 (0.01)	−0.03	0.01 (0.00)	0.03	−0.01 (0.03)
Neuroticism	−0.00 (0.01)	−0.01	0.00 (0.01)	0.01	0.00 (0.00)	0.02	0.01 (0.02)
Openness	0.01 (0.01)	0.02	0.01 (0.01)	0.01	0.00 (0.00)	0.02	0.02 (0.02)
Positive event frequency	0.35 (0.01)***	0.74	0.23 (0.01)***	0.71	0.12 (0.00)***	0.71	0.70 (0.02)***
Age	−0.002 (0.001)***	−0.06	−0.00 (0.00)	−0.04	−0.00 (0.00)	−0.02	−0.06 (0.02)*
Gender (woman)	−0.01 (0.01)	−0.02	−0.01 (0.01)	−0.02	−0.01 (0.01)	−0.01	−0.02 (0.02)
Gender (other)	–		–		0.04 (0.04)	0.02	–
Education (college or higher)	0.02 (0.01)	0.03	−0.00 (0.01)	−0.00	0.01 (0.01)	0.02	0.03 (0.02)
Sample (community vs. student)	–		–		−0.04 (0.01)***	−0.09	–

Note: In the NSDE samples, only male and female were assessed for gender. b = unstandardized regression coefficient, SE = standard error for unstandardized regression coefficient, β = standardized regression coefficient.

*$p < 0.05$; ***$p < 0.001$.

of our study variables with positive event diversity. The random-effect meta-analytical results summarizing the correlations across the three samples suggest that positive event diversity was positively correlated with positive affect, but not with negative affect. Concerning the Big Five, on a zero-order level, Extraversion, Agreeableness, and Openness were linked to higher and Neuroticism to lower positive event diversity. Importantly, positive event diversity shared approximately 50% of the variance with positive event frequency ($r = 0.73$), which supports the need to control for the shared variance between diversity and frequency in the regression models.

3.1 | H1: Links of positive event diversity with the Big Five

Multiple regression models did not show consistent links between personality and positive event diversity (Table 3). Instead, across all three studies, positive event frequency emerged as the strongest predictor of positive event diversity (standardized $\beta > 0.70$). Stepwise analyses confirmed that the links with all personality traits became nonsignificant after accounting for positive event frequency (Tables S1–S5). The only link with personality emerged in the NSDE 2 sample, in which people

higher in Conscientiousness tended to show lower positive event diversity across the study period compared to people lower in Conscientiousness. This effect, however, was not observed in any of the other studies. In meta-analyses of effect sizes across the three samples, there were no associations between any of the Big Five traits and positive event diversity, after controlling for positive event frequency.

3.2 | H2: Positive event diversity and affective well-being

3.2.1 | Daily positive affect

The multiple regression models did not provide any evidence for our hypothesis that positive event diversity would be linked to higher positive affect. Instead, when accounting for positive event frequency, the Big Five traits, and demographic covariates, positive event diversity was associated with lower person-mean daily

positive affect in the NSDE 2 sample but not in the two other samples (Table 4). Stepwise models showed that the zero-order association of positive event diversity with higher person-mean positive affect became nonsignificant after adding positive event frequency to the models (Table S6).

However, positive event frequency was a significant moderator of the association between positive event diversity and positive affect in both the NSDE 2 and the COVID-19 samples. Random effects meta-analyses summarizing the results from the three samples confirmed evidence for a significant frequency × diversity interaction: $\beta = -0.07$, 95% CI = $[-0.10; -0.04]$. When examining simple slopes (see Figure 1a–c), a pattern emerged among the three samples. Positive event diversity was not linked to daily positive affect for people who experienced fewer positive events, but positive event diversity appeared to be associated with lower daily positive affect for people who experienced many positive events. This pattern was most pronounced in the NSDE 2 sample.
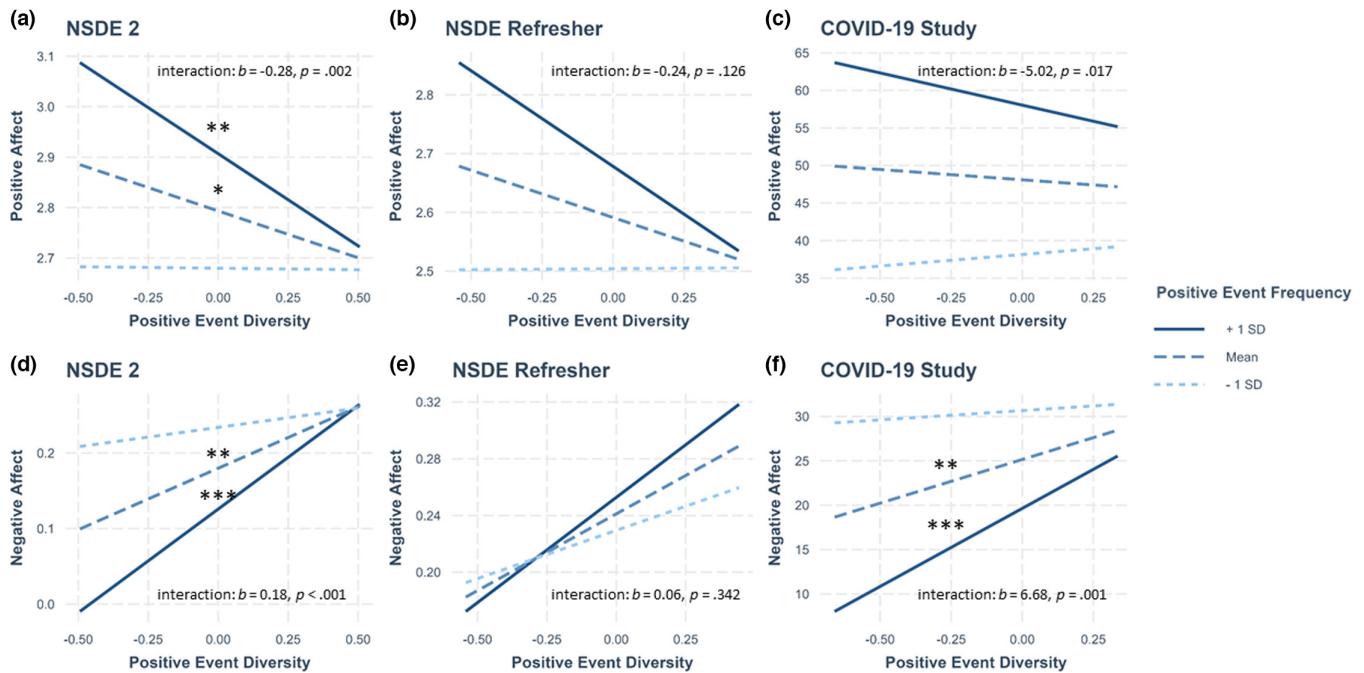
TABLE 4 Regression results of Big Five personality traits, positive event frequency, positive event diversity, and their interaction predicting person-mean positive affect.

Variables	NSDE 2 ($N = 1919$)		NSDE Refresher ($N = 744$)		COVID-19 study ($N = 1392$)		Meta-analytical estimate
	b (SE)	β	b (SE)	β	b (SE)	β	Partial r (SE)
Intercept	2.87 (0.05)***		2.59 (0.05)***		48.07 (1.33)***		
Positive event frequency	0.18 (0.04)***	0.16	0.12 (0.06)*	0.12	8.56 (0.65)***	0.55	0.17 (0.08)*
Positive event diversity	−0.19 (0.08)*	−0.08	−0.16 (0.18)	−0.05	−2.71 (4.10)	−0.03	−0.04 (0.02)*
Positive event frequency × PED	−0.28 (0.09)**	−0.08	−0.24 (0.15)	−0.06	−5.02 (2.10)*	−0.08	−0.07 (0.02)***
Extraversion	0.33 (0.03)***	0.27	0.36 (0.05)***	0.29	0.10 (0.45)	0.01	0.16 (0.08)*
Agreeableness	0.02 (0.04)	−0.02	−0.04 (0.06)	−0.03	1.33 (0.58)*	0.05	0.02 (0.02)
Conscientiousness	0.26 (0.03)***	0.16	0.27 (0.05)***	0.18	0.48 (0.53)	0.02	0.13 (0.05)*
Neuroticism	−0.28 (0.02)***	−0.25	−0.27 (0.04)***	−0.25	−3.77 (0.45)***	−0.20	−0.24 (0.01)***
Openness	−0.08 (0.03)*	−0.06	−0.11 (0.05)*	−0.08	−0.89 (0.47)	−0.04	−0.06 (0.02)***
Extraversion × PED	−0.25 (0.11)*	−0.06	−0.09 (0.24)	−0.02	0.04 (2.33)	0.00	−0.03 (0.02)
Agreeableness × PED	0.08 (0.11)	0.02	−0.10 (0.24)	−0.02	0.12 (2.74)	0.00	0.01 (0.02)
Conscientiousness × PED	0.12 (0.11)	0.02	0.18 (0.24)	0.03	5.33 (2.55)*	0.05	0.04 (0.02)*
Neuroticism × PED	0.02 (0.08)	0.01	−0.05 (0.15)	−0.01	2.87 (2.10)	0.03	0.01 (0.02)
Openness × PED	0.38 (0.11)***	0.09	0.06 (0.23)	0.01	2.23 (2.43)	0.06	0.04 (0.02)
Age	0.01 (0.001)***	0.11	0.01 (0.002)***	0.16	0.05 (0.03)	0.02	0.11 (0.04)**
Gender (woman)	−0.05 (0.03)	−0.03	−0.05 (0.05)	−0.04	−3.33 (1.14)**	−0.07	−0.05 (0.02)**
Gender (other)	–	–	–		−6.06 (4.05)	−0.03	–
Education (college or higher)	−0.11 (0.03)***	−0.07	−0.03 (0.05)	−0.02	0.62 (0.90)	0.02	−0.03 (0.03)
Sample (community vs. student)	–	–	–		3.76 (1.31)**	0.09	–

Note: In the NSDE samples, only male and female were assessed for gender. b = unstandardized regression coefficient, SE = standard error for unstandardized regression coefficient, and β = standardized regression coefficient.

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

Abbreviation: PED = positive event diversity.

FIGURE 1 Simple slopes for the interaction of positive event diversity × positive event frequency predicting both positive (a–c) and negative affect (d–f) in the three samples. See Tables 4 and 5 for full model statistics. Significance of simple slopes is indicated by asterisks: *$p < 0.05$, **$p < 0.01$, and ***$p < 0.001$.

3.2.2 | Daily negative affect

Contrary to our expectations, positive event diversity tended to be linked to higher, not lower negative affect, at mean levels of positive event frequency (Table 5). When synthesizing the three effect sizes in meta-analytical models, there was a modest statistically significant positive relationship between positive event diversity and negative affect: $\beta = 0.08$, 95% CI = [0.05;0.12]. The meta-analytic result suggests that for a person with an average level of positive event frequency, having positive events spread across more positive event types was linked to slightly higher person-mean daily negative affect. Stepwise models showed that this positive association between positive event diversity and higher person-mean negative affect became visible after controlling for positive event frequency (Table S7).

This effect, however, also needs to be interpreted in light of positive event frequency, as there was a significant interaction between event diversity and frequency in both the NSDE 2 and the COVID-19 samples, which was confirmed by a random-effects meta-analysis: $\beta = 0.09$, 95% CI = [0.05;0.12]. A clear pattern emerged among the three samples when examining the simple slopes (Figure 1d–f). Positive event diversity was linked to higher levels of person-mean daily negative affect among people who experienced more frequent daily positive events, while this link was nonsignificant among people who experienced less frequent daily positive events.

3.3 | H3: The Big Five as potential moderators of the link between positive event diversity and daily well-being

Although the diversity of positive events did not emerge as a unique predictor of daily positive affect, the link might only be present among people with certain personality traits such as high Openness. Thus, we examined the Big Five as potential moderators of the link between positive event diversity and daily well-being (i.e., positive and negative affect). Our models indicated that there was no consistent evidence for any of the Big Five as a moderator across the three studies. However, some noticeable results emerged in single studies (Tables 4 and 5).

3.3.1 | Daily positive affect

Our hypothesis that Openness would moderate the positive event diversity well-being link was only confirmed in the NSDE 2 sample. People low in Openness (1 *SD* below the mean) showed a significant inverse association between positive event diversity and positive affect (*simple slope* = −0.39, $p < 0.01$), but this association was not significant among people higher in Openness (*simple slope* for 1 *SD* above the mean Openness = 0.02, $p = 0.86$; Figure S1). This effect was unique to the NSDE 2 sample, and Openness was not a significant moderator in a meta-analysis across the three studies.

Similarly, in the NSDE 2 sample only, Extraversion moderated the link between positive event diversity and daily person-mean positive affect. People higher in Extraversion (1 *SD* above the mean) showed a significant negative link between positive event diversity and person-mean positive affect (*simple slope* = −0.33, *p* < 0.01), whereas people lower in Extraversion (1 *SD* below the mean) did not show a link (*simple slope* = −0.04, *p* = 0.70, Figure S2). However, this moderating effect was unique to the NSDE 2 sample, and meta-analyzing the interaction terms from the three samples did not reveal evidence for Extraversion as a moderator.

In addition, in the COVID-19 study only, Conscientiousness moderated the association between positive event diversity and person-mean daily positive affect. This effect was also significant in a meta-analytical estimate of the three samples. Simple slope analyses indicated, however, that positive event diversity was not significantly linked to positive affect at any observed level of Conscientiousness (see Figure S3).

3.3.2 | Daily negative affect

Neuroticism was a significant moderator of the link between positive event diversity and daily negative affect in the NSDE Refresher and the COVID-19 study, but in opposite directions (Table 5). In the NSDE Refresher sample, people high in Neuroticism (1 *SD* above the mean) showed a significant positive link between positive event diversity and daily negative affect (*simple slope* = 0.20, *p* = 0.01), but not those lower in Neuroticism (*simple slope* = 0.01, *p* = 0.86; Figure S4). In the COVID-19 study, however, the opposite pattern was observed. People higher in Neuroticism did not show a link (*simple slope* = 5.42, *p* = 0.23), while people low in Neuroticism showed a

TABLE 5 Regression results of Big Five personality traits, positive event frequency, positive event diversity, and their interaction predicting person-mean negative affect.

Variables	NSDE 2 (*N* = 1919) b (*SE*)	β	NSDE Refresher (*N* = 744) b (*SE*)	β	COVID-19 study (*N* = 1392) b (*SE*)	β	Meta-analytical estimate Partial *r* (*SE*)
Intercept	0.12 (0.02)***		0.24 (0.02)***		25.17 (1.31)***		
Positive event frequency	−0.09 (0.02)***	−0.20	0.02 (0.02)	0.04	−4.75 (0.64)***	−0.36	−0.10 (0.06)
Positive event diversity	0.16 (0.03)***	0.18	0.11 (0.07)	0.09	9.81 (4.04)*	0.13	0.08 (0.02)***
Positive event frequency × PED	0.18 (0.04)***	0.13	0.06 (0.06)	0.04	6.68 (2.06)**	0.12	0.09 (0.02)***
Extraversion	−0.06 (0.01)***	−0.12	−0.09 (0.02)***	−0.20	0.52 (0.44)	0.03	−0.08 (0.06)
Agreeableness	0.03 (0.01)*	0.05	0.05 (0.02)*	0.11	−1.69 (0.57)**	−0.08	0.02 (0.05)
Conscientiousness	−0.09 (0.01)***	−0.15	−0.06 (0.02)**	−0.11	1.30 (0.52)*	0.07	−0.06 (0.07)
Neuroticism	0.13 (0.01)***	0.30	0.14 (0.01)***	0.35	3.38 (0.45)***	0.21	0.28 (0.04)***
Openness	0.06 (0.01)***	0.12	0.09 (0.02)***	0.18	1.10 (0.46)*	0.06	0.11 (0.03)***
Extraversion × PED	0.06 (0.04)	0.04	0.06 (0.09)	0.03	1.59 (2.30)	0.02	0.03 (0.02)
Agreeableness × PED	−0.00 (0.05)	0.00	−0.01 (0.09)	−0.00	0.49 (2.70)	0.00	0.00 (0.02)
Conscientiousness × PED	−0.03 (0.05)	−0.02	0.03 (0.09)	0.01	−5.33 (2.50)*	−0.06	−0.02 (0.02)
Neuroticism × PED	0.02 (0.03)	0.01	0.14 (0.06)*	0.08	−6.01 (2.06)**	−0.08	0.01 (0.05)
Openness × PED	−0.09 (0.04)*	−0.05	−0.04 (0.09)	−0.02	0.98 (2.39)	0.01	−0.02 (0.02)
Age	−0.002 (0.0005)***	−0.09	−0.002 (0.001)*	−0.09	−0.05 (0.03)	−0.06	−0.08 (0.02)***
Gender (woman)	0.04 (0.01)**	0.07	0.01 (0.02)	0.01	1.39 (1.12)	0.03	0.05 (0.02)**
Gender (other)	–	–	–	–	7.04 (3.98)	0.05	–
Education (college or higher)	0.01 (0.01)	0.02	−0.05 (0.02)**	−0.10	−1.13 (0.89)	−0.04	−0.04 (0.04)
Sample (community vs. student)	–	–	–	–	−3.00 (1.29)*	−0.08	–

Note: In the NSDE samples, only male and female were assessed for gender. b = unstandardized regression coefficient, *SE* = standard error for unstandardized regression coefficient, β = standardized regression coefficient.

Abbreviation: PED, positive event diversity.

*p < 0.05; **p < 0.01; ***p < 0.001.

significant positive link (*simple slope* = 14.25, *p* < 0.01; see Figure S5). Like all other interaction terms, random effect meta-analyses indicated that this effect was not consistent across the three studies.

4 | DISCUSSION

This study aimed to examine positive event diversity and its well-being and personality correlates across three large life span samples of adults. We found no evidence for our hypothesis that people who experience more diverse positive events would have better daily affective well-being. On the contrary, when synthesizing effect sizes across the three samples, there was evidence for higher positive event diversity being linked to less favorable daily well-being, but only among people who reported an average-to-high frequency of daily positive events. Concerning personality correlates, there was no evidence for our hypothesis that people higher in Openness would experience positive events spread across more categories after accounting for the higher levels of positive events typically reported by people high in Openness. Finally, interesting patterns emerged in different samples when examining the Big Five personality traits as moderators of the link between positive event diversity and affective well-being, but these effects were not consistent across the three studies. These results suggest that there might be no affective advantage of experiencing positive events spread across more event types versus concentrated among fewer event types. Rather, the frequency of positive events was more consequential for affective well-being than the diversity of positive event types.

4.1 | Positive event diversity and personality

Our hypotheses were based on prior theory and findings that people higher in Openness have more diverse interests and would seek out a greater variety of daily experiences (Matz, 2021). Contrary to our expectations, we did not find higher positive event diversity among people higher in Openness versus those lower in Openness, after adjusting for positive event frequency. Past research has shown that higher Openness contributes to the tendency to engage in idea-related endeavors and to seek out intellectual stimulation (Ashton & Lee, 2007; Schwaba et al., 2018), which in turn may translate to a higher frequency of daily positive events evenly distributed across different positive event types (Klaiber et al., 2022). However, our results did not support this prediction, as the greater diversity of positive events among people high

in Openness could be fully explained by their tendency to engage in positive events more frequently. The drive of high-Openness individuals to seek out novel positive situations such as going to an art gallery or trying out a new meditation routine may result in a greater diversity of positive events, but also at the same time in a higher frequency of positive events. This suggests that Openness may contribute to behaviors that are associated with both greater frequency and diversity of positive events. Due to the overlap of these constructs, however, positive event diversity may not provide additional information about the daily lives of people high in Openness beyond what is indicated by positive event frequency. This finding is in line with a recent experience sampling study, that connected state expressions of Openness with more time spent engaging in different activities outside one's own household, but they found that Openness was not related to indices of diversity of activities, places, or social partners (Lindner et al., 2023).

Findings from our largest sample provided some evidence for Openness as a moderator of the association between positive event diversity and well-being. Contrary to our expectations, people higher in Openness did not report higher positive affect if they experienced higher positive event diversity, but people lower in Openness reported lower positive affect if they experienced higher positive event diversity. This suggests that people low in Openness may be more comfortable with their positive events happening within similar contexts compared to experiencing positive events across more diverse contexts. Although this effect confirms our initial hypotheses that Openness might moderate the affective correlates of positive event diversity, it needs to be interpreted with caution as it emerged in only one of the three samples.

Concerning Extraversion, we did not find evidence for our hypothesis that people higher in Extraversion would experience lower positive event diversity. Although our data indicated that people higher in Extraversion reported more positive social interactions, they also reported more positive events across the other positive event types. Importantly, we do not know whether positive events in categories other than positive social interactions (such as work events, events at home, nature events, or other miscellaneous events) involved social interactions or if they happened in solitude. Future research would benefit from further investigating the role of Extraversion in socially oriented positive events, including diversity in social contexts and interaction partners.

Similar to Extraversion and Openness, the remaining Big Five traits were not found to be predictors of positive event diversity or moderators of the relationship between positive event diversity and daily affective well-being. Significant patterns that emerged in single

studies were not supported by our meta-analytical summaries. Although the Big Five personality traits did not predict positive event diversity nor moderate the link between positive event diversity and affective well-being, it might be that lower level traits such as Need for Novelty (González-Cutre et al., 2016) or specific facets of the Big Five instead of global traits could be more meaningfully related to positive event diversity.

4.2 | Positive event diversity and well-being

Contrary to our hypotheses, the potential well-being benefits of higher positive event diversity were fully explained by the overlap with positive event frequency. In fact, there appeared to be negative affective implications of having positive events spread across different positive event types, especially for people who experienced a high number of positive events. Experiencing frequent positive events of different types might represent role strain in balancing multiple—possibly competing—social roles and responsibilities. For example, a person who is going for a run in the morning, accomplishing an important goal at work, playing with their children at the park, and sharing the joy of their friend getting a new job has a high diversity and frequency of positive events, but each event presents a different social role (parent, employee, friend; Meter & Agronow, 1982). As our data provided limited information on social roles, we could not formally test this explanation, and future work is needed to examine the interplay between social roles, role strain, and positive events. In particular, participants could indicate whether each reported event is related to one of their social roles, allowing examinations into whether positive events that cross multiple roles differ from those within a single life role.

An important implication of our findings is that there may be no detriment to experiencing positive events that are similar to each other. For example, a person who often experiences positive events at work but not in other contexts would not have lower average positive affect, compared to a person with high diversity across their positive events. This does not imply, however, that experiencing positive events in different contexts has no benefits. Having positive events in different life domains might foster feelings of social connection (Totenhagen et al., 2012), domain-specific self-esteem (Zeigler-Hill et al., 2010), or sharpen cognitive skills by forcing engagement with different environments (Hultsch et al., 1999; Logsdon & Teri, 1997; Siedlecki et al., 2009). Thus, future work should examine other potential benefits of positive event diversity that go beyond daily affective well-being.

4.3 | Strengths and limitations

This study should be viewed in light of its strengths and limitations. This is the first study, to the best of our knowledge, to examine the diversity of daily positive events and its well-being and personality correlates. We tested theory-grounded hypotheses in three large samples of adults. Besides being well-powered, these samples encompassed adults across a wide age range and captured daily life during different historical periods (e.g., mid-2000s for NSDE 2, post-Great Recession for NSDE Refresher, and COVID-19 pandemic). The generalizability of the findings is limited as our samples were collected in North America and were predominantly White. Past research has demonstrated important cross-cultural differences in the health implications of positive events (Clobert et al., 2020) and other work has highlighted the racial context in which positive events occur (Ong et al., 2022).

We used established procedures to estimate positive event diversity, similar to procedures for stressor diversity outlined by Koffer et al. (2016). These procedures, however, are not without their limitations. During each nightly survey, people were only able to report one positive event per category. If multiple positive events were experienced in a given category on the same day, these events would not have been counted, potentially biasing the diversity index. In addition, many of the assessed positive event categories included inherently social situations (i.e., positive social interaction, network events), which may be particularly relevant for Extraversion compared to other personality traits such as Conscientiousness. Future research could use more fine-grained event categories (e.g., achievement events), multiple assessments per day, day reconstruction method (Kahneman et al., 2004), or other methods to obtain more precise assessments of daily positive events.

Furthermore, the best timescale to examine positive event diversity remains unclear. While it is possible that there are stable differences between people in how many different types of positive events they experience, a person's diversity of positive events likely changes across the life span and even on a weekly basis. In this study, we specifically focused on whether an index of positive event diversity based on a 1-week snapshot was linked to affective well-being experienced during the same time period. However, future work on the stability, variability, and trajectories of positive event diversity across the adult life span is warranted.

5 | CONCLUSION

In this study, we responded to calls to examine novel metrics that can provide insights into the diversity of daily

life experiences (Benson et al., 2018). We specifically focused on the associations of diversity in daily positive events with personality traits and affective well-being. Contrary to expectations, we found little support for personality traits as predictors of positive event diversity, independent of the frequency of such events. This study also demonstrates that event diversity should be interpreted alongside indices of event frequency, as frequent events in different contexts may pose strain on individuals (Koffer et al., 2016).

Furthermore, positive event diversity is only one potential metric that can illuminate the range and variety of positive psychosocial experiences. Our results should be interpreted alongside other aspects of daily life diversity, such as emodiversity (Quoidbach et al., 2014), stressor diversity (Koffer et al., 2016), and activity diversity (Lee et al., 2018). Examining the diversity of environmental features such as positive events that can elicit responses in emotional, cognitive, and biological systems can provide a holistic assessment of both the abundance and the variety of features that exist in the ecosystem of daily life. This study can add to our comprehensive understanding of the extent to which, and under what conditions, the range of experiences an individual encounters contributes to their well-being.

AUTHOR CONTRIBUTIONS

All authors contributed to the manuscript's conceptual development and approved its final version for submission. The lead author lead the data analysis, and drafting of the manuscript.

ACKNOWLEDGMENTS

ETHICS STATEMENT

This study was approved by the Behavioral Research Ethics Board of the University of British Columbia. In addition, data collection for NSDE was originally approved by research ethics boards at the study sites, including the University of Wisconsin, Madison, and The Pennsylvania State University.

FUNDING INFORMATION

ORCID

Patrick Klaiber https://orcid.org/0000-0002-1957-1140
Patrick L. Hill https://orcid.org/0000-0001-5902-6051
Nancy L. Sin https://orcid.org/0000-0003-2519-7797

ENDNOTES

[1] https://osf.io/sh5n8/?view_only=abe8fd501d404f85846117705 6475752

[2] https://www.icpsr.umich.edu/web/NACDA/studies/26841

REFERENCES

Almeida, D. M., Wethington, E., & Kessler, R. C. (2002). The daily inventory of stressful events: An interview-based approach for measuring daily stressors. *Assessment*, 9(1), 41–55. https://doi.org/10.1177/1073191102091006

Aloe, A. M. (2014). An empirical investigation of partial effect sizes in meta-analysis of correlational data. *The Journal of General Psychology*, 141(1), 47–64. https://doi.org/10.1080/00221309.2013.853021

Antonoplis, S., & John, O. P. (2022). Who has different-race friends, and does it depend on context? Openness (to other), but not agreeableness, predicts lower racial homophily in friendship networks. *Journal of Personality and Social Psychology*, 122(5), 894–919. https://doi.org/10.1037/pspp0000413

Ashton, M. C., & Lee, K. (2007). Empirical, theoretical, and practical advantages of the HEXACO model of personality structure. *Personality and Social Psychology Review*, 11(2), 150–166. https://doi.org/10.1177/1088868306294907

Benson, L., Ram, N., Almeida, D. M., Zautra, A. J., & Ong, A. D. (2018). Fusing biodiversity metrics into investigations of daily life: Illustrations and recommendations with emodiversity. *The Journals of Gerontology: Series B*, 73(1), 75–86. https://doi.org/10.1093/geronb/gbx025

Charles, S. T., Mogle, J., Leger, K. A., & Almeida, D. M. (2019). Age and the factor structure of emotional experience in adulthood. *The Journals of Gerontology: Series B*, 74(3), 419–429. https://doi.org/10.1093/geronb/gbx116

Clobert, M., Sims, T. L., Yoo, J., Miyamoto, Y., Markus, H. R., Karasawa, M., & Levine, C. S. (2020). Feeling excited or taking a bath: Do distinct pathways underlie the positive affect-health link in the US and Japan? *Emotion*, 20(2), 164–178. https://doi.org/10.1037/emo0000531

Costa, P. T., Jr., & McCrae, R. R. (2008). The revised NEO personality inventory (NEO-PI-R). In G. J. Boyle, G. Matthews, & D. H. Saklofske (Eds.), *The SAGE handbook of personality theory and assessment* (Vol. 2, pp. 179–198). Sage Publications, Inc. https://doi.org/10.4135/9781849200479.n9

Costa, P. T., & McCrae, R. R. (1992). *NEO personality inventory-revised (NEO PI-R)*. Psychological Assessment Resources.

de Vries, R. E., Wawoe, K. W., & Holtrop, D. (2016). What is engagement? Proactivity as the missing link in the HEXACO model of personality. *Journal of Personality*, *84*(2), 178–193. https://doi.org/10.1111/jopy.12150

Dollinger, S. J. (1993). Research note: Personality and music preference: Extraversion and excitement seeking or openness to experience? *Psychology of Music*, *21*(1), 73–77. https://doi.org/10.1177/030573569302100105

González-Cutre, D., Sicilia, Á., Sierra, A. C., Ferriz, R., & Hagger, M. S. (2016). Understanding the need for novelty from the perspective of self-determination theory. *Personality and Individual Differences*, *102*, 159–169. https://doi.org/10.1016/j.paid.2016.06.036

Greenberg, D. M., Kosinski, M., Stillwell, D. J., Monteiro, B. L., Levitin, D. J., & Rentfrow, P. J. (2016). The song is you: Preferences for musical attribute dimensions reflect personality. *Social Psychological and Personality Science*, *7*(6), 597–605. https://doi.org/10.1177/1948550616641473

Hart, P. M., & Wearing, A. J. (1995). Police stress and well-being: Integrating personality, coping and daily work experiences. *Journal of Occupational and Organizational Psychology*, *68*(2), 133–156. https://doi.org/10.1111/j.2044-8325.1995.tb00578.x

Hayes, A. F., & Coutts, J. J. (2020). Use Omega Rather than Cronbach's Alpha for Estimating Reliability. *But…, Communication Methods and Measures*, *14*(1), 1–24. https://doi.org/10.1080/19312458.2020.1718629

Hultsch, D. F., Hertzog, C., Small, B. J., & Dixon, R. A. (1999). Use it or lose it: Engaged lifestyle as a buffer of cognitive decline in aging? *Psychology and Aging*, *14*(2), 245–263. https://doi.org/10.1037/0882-7974.14.2.245

Jackson, J. J., Hill, P. L., Payne, B. R., Parisi, J. M., & Stine-Morrow, E. A. L. (2020). Linking openness to cognitive ability in older adulthood: The role of activity diversity. *Aging & Mental Health*, *24*(7), 1079–1087. https://doi.org/10.1080/13607863.2019.1655705

John, O. P., Naumann, L. P., & Soto, C. J. (2008). Paradigm shift to the integrative Big Five trait taxonomy. In O. P. John, R. W. Robins, & L. A. Pervin (Eds.), *Handbook of personality: Theory and research* (Vol. *3*, pp. 114–158). Guilford Press.

Kahneman, D., Krueger, A. B., Schkade, D. A., Schwarz, N., & Stone, A. A. (2004). A survey method for characterizing daily life experience: The day reconstruction method. *Science*, *306*(5702), 1776–1780. https://doi.org/10.1126/science.1103572

Kessler, R. C., Andrews, G., Colpe, L. J., Hiripi, E., Mroczek, D. K., Normand, S.-L., Walters, E. E., & Zaslavsky, A. M. (2002). Short screening scales to monitor population prevalences and trends in non-specific psychological distress. *Psychological Medicine*, *32*(6), 959–976. https://doi.org/10.1017/s0033291702006074

Klaiber, P., Hill, P., DeLongis, A., & Sin, N. L. (2023). *Positive event diversity: Relationship with wellbeing and personality—Data and R-code.* https://doi.org/10.17605/OSF.IO/SH5N8

Klaiber, P., Ong, L. Q., & Sin, N. L. (in preparation). *Associations of daily positive events with health and psychosocial well-being: A systematic review and meta-analysis.* Unpublished manuscript.

Klaiber, P., Wen, J. H., DeLongis, A., & Sin, N. L. (2021). The ups and downs of daily life during COVID-19: Age differences in affect, stress, and positive events. *The Journals of Gerontology: Series B*, *76*(2), e30–e37. https://doi.org/10.1093/geronb/gbaa096

Klaiber, P., Wen, J. H., Ong, A. D., Almeida, D. M., & Sin, N. L. (2022). Personality differences in the occurrence and affective correlates of daily positive events. *Journal of Personality*, *90*(3), 441–456. https://doi.org/10.1111/jopy.12676

Koffer, R. E., Ram, N., Conroy, D. E., Pincus, A. L., & Almeida, D. M. (2016). Stressor diversity: Introduction and empirical integration into the daily stress model. *Psychology and Aging*, *31*(4), 301–320. https://doi.org/10.1037/pag0000095

Lachman, M. E., & Weaver, S. L. (1997). *The Midlife Development Inventory (MIDI) Personality Scales: Scale construction and scoring.* (pp. 1–9).Brandeis University.

Lee, K., & Ashton, M. C. (2006). Further assessment of the HEXACO personality inventory: Two new facet scales and an observer report form. *Psychological Assessment*, *18*(2), 182–191. https://doi.org/10.1037/1040-3590.18.2.182

Lee, S., Koffer, R. E., Sprague, B. N., Charles, S. T., Ram, N., & Almeida, D. M. (2018). Activity diversity and its associations with psychological well-being across adulthood. *The Journals of Gerontology. Series B, Psychological Sciences and Social Sciences*, *73*(6), 985–995. https://doi.org/10.1093/geronb/gbw118

Lindner, S., Stieger, M., Rüegger, D., Kowatsch, T., Flückiger, C., Mehl, M. R., & Allemand, M. (2023). How is variety in daily life related to the expression of personality states? An ambulatory assessment study. *European Journal of Personality*, 08902070221149593. https://doi.org/10.1177/08902070221149593

Logsdon, R. G., & Teri, L. (1997). The pleasant events schedule-AD: Psychometric properties and relationship to depression and cognition in Alzheimer's disease patients. *Gerontologist*, *37*(1), 40–45. https://doi.org/10.1093/geront/37.1.40

Lucas, R. E., Le, K., & Dyrenforth, P. S. (2008). Explaining the extraversion/positive affect relation: Sociability cannot account for extraverts' greater happiness. *Journal of Personality*, *76*(3), 385–414. https://doi.org/10.1111/j.1467-6494.2008.00490.x

Magurran, A. E. (1988). *Ecological diversity and its measurement.* Princeton University Press.

Matz, S. C. (2021). Personal echo chambers: Openness-to-experience is linked to higher levels of psychological interest diversity in large-scale behavioral data. *Journal of Personality and Social Psychology*, *121*(6), 1284–1300. https://doi.org/10.1037/pspp0000324

Meter, M. J. S. V., & Agronow, S. J. (1982). The stress of multiple roles: The case for role strain among married college women. *Family Relations*, *31*(1), 131–138. https://doi.org/10.2307/584211

Mroczek, D. K., & Kolarz, C. M. (1998). The effect of age on positive and negative affect: A developmental perspective on happiness. *Journal of Personality and Social Psychology*, *75*(5), 1333–1349. https://doi.org/10.1037/0022-3514.75.5.1333

Ong, A. D., Benson, L., Zautra, A. J., & Ram, N. (2018). Emodiversity and biomarkers of inflammation. *Emotion*, *18*(1), 3–14. https://doi.org/10.1037/emo0000343

Ong, A. D., Cerrada, C. J., Ja, N. M., Lee, R. A., & Tan, A. (2022). Racial uplifts and the Asian American experience. *The American Psychologist*, *78*, 790–810. https://doi.org/10.1037/amp0001115

Quoidbach, J., Gruber, J., Mikolajczak, M., Kogan, A., Kotsou, I., & Norton, M. I. (2014). Emodiversity and the emotional ecosystem. *Journal of Experimental Psychology: General*, *143*(6), 2057–2066. https://doi.org/10.1037/a0038025

Quoidbach, J., Mikolajczak, M., Gruber, J., Kotsou, I., Kogan, A., & Norton, M. I. (2018). Robust, replicable, and theoretically-grounded: A response to Brown and Coyne's (2017) commentary on the relationship between emodiversity and health. *Journal of Experimental Psychology: General*, *147*(3), 451–458. https://doi.org/10.1037/xge0000400

Rammstedt, B., & John, O. P. (2007). Measuring personality in one minute or less: A 10-item short version of the Big Five Inventory in English and German. *Journal of Research in Personality*, *41*(1), 203–212. https://doi.org/10.1016/j.jrp.2006.02.001

Ryff, C., Almeida, D., Ayanian, J., Binkley, N., Carr, D. S., Coe, C., Davidson, R., Grzywacz, J., Karlamangla, A., Krueger, R., Lachman, M., Love, G., Mailick, M., Mroczek, D., Radler, B., Seeman, T., Sloan, R., Thomas, D., Weinstein, M., & Williams, D. (2017). *Midlife in the United States (MIDUS Refresher), 2011-2014*. Inter-university Consortium for Political and Social Research [distributor]. https://doi.org/10.3886/ICPSR36532.v3

Ryff, C. D., & Almeida, D. M. (2017). *Midlife in the United States (MIDUS 2): Daily Stress Project, 2004-2009*. Inter-university Consortium for Political and Social Research [distributor]. https://doi.org/10.3886/ICPSR26841.v2

Schwaba, T., Luhmann, M., Denissen, J. J. A., Chung, J. M., & Bleidorn, W. (2018). Openness to experience and culture-openness transactions across the lifespan. *Journal of Personality and Social Psychology*, *115*(1), 118–136. https://doi.org/10.1037/pspp0000150

Scott, S. B., Sliwinski, M. J., Zawadzki, M., Stawski, R. S., Kim, J., Marcusson-Clavertz, D., Lanza, S. T., Conroy, D. E., Buxton, O., Almeida, D. M., & Smyth, J. M. (2018). A coordinated analysis of variance in affect in daily life. *Assessment*, *27*(8), 1638–1698. https://doi.org/10.1177/1073191118799460

Sieber, S. D. (1974). Toward a theory of role accumulation. *American Sociological Review*, *39*(4), 567–578.

Siedlecki, K. L., Tatarina, O., Sanders, L., Albert, M., Blacker, D., Dubois, B., Brandt, J., & Stern, Y. (2009). Comparison of patient and caregiver reports of patient activity participation and its relationship to mental health in patients with Alzheimer's disease. *Journals of Gerontology. Series B, Psychological Sciences and Social Sciences*, *64*(6), 687–695. https://doi.org/10.1093/geronb/gbp071

Sin, N. L., & Almeida, D. M. (2018). Daily positive experiences and health: Biobehavioral pathways and resilience to daily stress. In C. D. Ryff & R. F. Krueger (Eds.), *The Oxford handbook of integrative health science* (pp. 154–172). Oxford University Press. https://doi.org/10.1093/oxfordhb/9780190676384.013.10

Sin, N. L., Graham-Engeland, J. E., & Almeida, D. M. (2015). Daily positive events and inflammation: Findings from the National Study of Daily Experiences. *Brain, Behavior, and Immunity*, *43*, 130–138. https://doi.org/10.1016/j.bbi.2014.07.015

Soto, C. J., & John, O. P. (2009). Using the California psychological inventory to assess the Big Five personality domains: A hierarchical approach. *Journal of Research in Personality*, *43*(1), 25–38. https://doi.org/10.1016/j.jrp.2008.10.005

Srivastava, S., Angelo, K. M., & Vallereux, S. R. (2008). Extraversion and positive affect: A day reconstruction study of person–environment transactions. *Journal of Research in Personality*, *42*(6), 1613–1618. https://doi.org/10.1016/j.jrp.2008.05.002

Sun, J., Harris, K., & Vazire, S. (2020). Is well-being associated with the quantity and quality of social interactions? *Journal of Personality and Social Psychology*, *119*(6), 1478–1496. https://doi.org/10.1037/pspp0000272.supp

Tansley, A. G. (1935). The use and abuse of vegetational concepts and terms. *Ecology*, *16*(3), 284–307.

Thoits, P. A. (1983). Multiple identities and psychological well-being: A reformulation and test of the social isolation hypothesis. *American Sociological Review*, *48*(2), 174–187.

Totenhagen, C. J., Serido, J., Curran, M. A., & Butler, E. A. (2012). Daily hassles and uplifts: A diary study on understanding relationship quality. *Journal of Family Psychology*, *26*(5), 719–728. https://doi.org/10.1037/a0029628

Urban-Wojcik, E. J., Mumford, J. A., Almeida, D. M., Lachman, M. E., Ryff, C. D., Davidson, R. J., & Schaefer, S. M. (2022). Emodiversity, health, and well-being in the Midlife in the United States (MIDUS) daily diary study. *Emotion*, *22*(4), 603–615. https://doi.org/10.1037/emo0000753

Viechtbauer, W. (2010). Conducting meta-analyses in R with the metafor package. *Journal of Statistical Software*, *36*(3), 1–48. https://doi.org/10.18637/jss.v036.i03

Watson, D., & Clark, L. A. (1999). *The PANAS-X: Manual for the positive and negative affect schedule-expanded form*.

Zautra, A. J., Affleck, G. G., Tennen, H., Reich, J. W., & Davis, M. C. (2005). Dynamic approaches to emotions and stress in everyday life: Bolger and Zuckerman reloaded with positive as well as negative affects. *Journal of Personality*, *73*(6), 1511–1538. https://doi.org/10.1111/j.0022-3506.2005.00357.x

Zeigler-Hill, V., Myers, E. M., & Clark, C. B. (2010). Narcissism and self-esteem reactivity: The role of negative achievement events. *Journal of Research in Personality*, *44*(2), 285–292. https://doi.org/10.1016/j.jrp.2010.02.005

Zheng, J., Morstead, T., Sin, N., Klaiber, P., Umberson, D., Kamble, S., & DeLongis, A. (2021). Psychological distress in North America during COVID-19: The role of pandemic-related stressors. *Social Science & Medicine*, *270*, 113687. https://doi.org/10.1016/j.socscimed.2021.113687

SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.