

Electronic Supplementary Materials 1

Effects of Idle Time on Well-Being: An Experimental Study

The Role of Dispositions

Dispositions, also referred to as personality, refer to a stable pattern of thoughts, feelings, and behaviors that are characteristic of an individual (Cervone & Pervin, 2019) and shape their experiences and behaviors. Because of their dispositions, some people are better suited to certain situations than others (Rauthmann & Sherman, 2020), and different employees have different appraisals of similar situations (Li et al., 2010). AET posits that individual dispositions could directly affect subjective idle time as an appraisal (Luhmann et al., 2021; Weiss & Cropanzano, 1996) and further affect the relationships between objective and subjective idle time and between subjective idle time and well-being (Colbert et al., 2004; Haehner et al., 2022). In the context of idle time and well-being, the personality facets of emotionality, extraversion, conscientiousness, and openness (Ashton & Lee, 2007, 2009), as well as the more specific dispositions of accommodation, assimilation, and boredom proneness (Hanfstingl et al., 2022; Tam et al., 2021), are of particular interest. We did not assume honesty-humility and agreeableness as moderators because they reflect how individuals typically relate to others, rather than their perceptions, coping mechanisms related to time, affective responses, and overall well-being (Aghababaei & Arji, 2014).

Emotionality (or neuroticism; John & Stivastava, 1999) describes the tendency to experience and express negative emotions. Employees with high emotionality tend to appraise events negatively and to respond more negatively to unfavorable circumstances (Aghababaei & Arji, 2014; Răducu & Stănculescu, 2022). As a result, employees with high emotionality may be more aware of objective idle time and more likely to appraise it as idle. Employees with high emotionality may be more perturbed by this subjective appraisal, leading to more negative affect and lower task satisfaction than employees with low emotionality.

Hypothesis 3: Emotionality strengthens (a) the positive effect of objective on subjective idle time and the negative effects of subjective idle time on (b) affect and (c) task satisfaction.

Extraversion describes an individual's degree of being outgoing and sociable. High levels of extraversion reflect the tendency to seek social interactions and show greater life satisfaction (Aghababaei & Arji, 2014). While this direct effect of high extraversion on well-being may be beneficial, high extraversion can be detrimental in the context of idle time. Employees with high extraversion may perceive idle time, during which the desire for active and social situations is not fulfilled, more intensely and appraise this situation more negatively. They may feel the absence of tasks or social interaction more acutely (Lanaj et al., 2016) and as more stressful, which also exacerbates the negative effects on well-being compared to employees with low extraversion.

Hypothesis 4: Extraversion strengthens (a) the positive effect of objective on subjective idle time and the negative effects of subjective idle time on (b) affect and (c) task satisfaction.

Conscientiousness describes the degree to which a person is organized and disciplined. Highly conscientious employees are goal- and performance-oriented, try to avoid mistakes, and plan ahead (Ashton & Lee, 2007). Highly conscientious employees may interpret idle time as a deviation from their preferred state of productivity and may be more aware of the time being idle. Because they prefer to be productive, the sense of not being able to achieve their goals may be more detrimental to their well-being than for individuals with low conscientiousness (Dudley et al., 2006).

Hypothesis 5: Conscientiousness strengthens (a) the positive effects of objective on subjective idle time and the negative effect of subjective idle time on (b) affect and (c) task satisfaction.

Openness to experience means being intellectual, curious, and creative (Ashton & Lee, 2007), which may not be beneficial during idle time. Employees with high openness may prefer variety over monotony and be more sensitive to periods of inactivity. Thus, they may perceive the monotony during objective idle time more strongly, leading to a stronger association with subjective idle time compared to employees with low openness. Subjective idle time, typically perceived as

boring (Zeschke & Zacher, 2023), may be more detrimental to employees with high openness because of the lack of stimulation that is more detrimental to their well-being compared to employees with low openness.

Hypothesis 6: Openness to new experiences strengthens (a) the positive effect of objective on subjective idle time and the negative effects of subjective idle time on (b) affect and (c) task satisfaction.

The dispositions *assimilation* and *accommodation* describe different coping styles when faced with obstacles (Hanfstingl et al., 2022; Henselmans et al., 2011). Assimilation describes the tendency to engage in proactive and persistent approaches, aimed at changing the external world and overcoming obstacles (Hanfstingl et al., 2022). In the context of idle time, not being able to pursue one's plans and wanting to "push through" but not being able to, assimilation may be detrimental. Their proactive and persistent nature might lead them to perceive objective idle time more readily as an obstacle and thus experience it more intensely (Pinquart et al., 2021), increasing their sense of subjective idle time. Therefore, for individuals with a high assimilation orientation, idle time may be particularly stressful and detrimental to their well-being.

Hypothesis 7: Assimilation strengthens (a) the positive effect of objective on subjective idle time and the negative effects of subjective idle time on (b) affect and (c) task satisfaction.

Accommodation refers to the tendency to adapt one's thoughts, feelings, and goals to the circumstances when faced with obstacles (Hanfstingl et al., 2022). Highly accommodative employees then tend to think about their accomplishments and to disengage from a goal. They may be more likely to adapt to the circumstances and accept idle time as a part of their workday rather than perceiving it as an obstacle (Pinquart et al., 2021), thereby reducing their subjective experience of idle time. Subjective idle time may be less detrimental for individuals with a high accommodation orientation because they may reframe the situation or focus on personal development, which could reduce the negative impact of subjective idle time on their well-being.

Hypothesis 8: Accommodation buffers (a) the positive effect of objective on subjective idle time and the negative effects of subjective idle time on (b) affect and (c) task satisfaction.

Finally, *boredom proneness* refers to the stable tendency to experience boredom (Hunter et al., 2016; Struk et al., 2017), a mostly negative affect in response to monotonous, repetitive, or uninteresting stimuli, signaling a desire for meaningful activity (Raffaelli et al., 2018; Westgate & Steidle, 2020). Employees prone to boredom are more sensitive to situations where there is a lack of stimulation and may appraise even small amounts of objective idle time as significantly idle. For them, this appraisal may have stronger negative effects on well-being as this subjective experience may be associated with heightened negative emotions and a stronger decrease in overall well-being than low boredom proneness employees (Tam et al., 2021).

Hypothesis 9: Boredom proneness strengthens (a) the positive effect of objective on subjective idle time and the negative effects of idle time on (b) affect and (c) task satisfaction.

Method

Hypothesis Tests

Hypotheses 3 to 9 state that dispositions moderate the positive effects of objective on subjective idle time and the negative effects of idle time on affect and job satisfaction. We calculated separate models in which these dispositions were specified as moderators of both these relationships. With CFIs and TLIs well below .95 and RMSEAs well above .06, none of the moderation models fit the data and were, therefore, inconclusive (Hu & Bentler, 1999) and Hypotheses 3 to 9 were not supported. The results are shown in Tables S3 to S12 in the OSM.

Exploratory Results

Consistent with propositions of AET, we further examined whether dispositions moderated only the relationship between objective idle time as an event and subjective idle time as an appraisal (a-path), but not the relationship between subjective idle time and well-being outcomes (b-path; Weiss & Cropanzano, 1996). However, the fit indices of these supplemental models were also not sufficient to be interpreted (see Tables S3 to S9 in the OSM).

We further examined how dispositions directly influenced subjective idle time as an appraisal, as suggested by AET (Weiss & Cropanzano, 1996). To test the direct effects of dispositions on

subjective idle time, we used the baseline model (Model 1) and stepwise added boredom proneness in Model 2 as a predictor of subjective idle time. In Model 3, we added the HEXACO dimensions and the coping styles to examine their incremental validity to boredom proneness (J. A. Hunter et al., 2016; Sackett & Lievens, 2008), and in Model 4, we added age as an easily collected measure that influences time perception and, possibly, subjective idle time. Some research suggests that older individuals report that time passes more quickly (Wittmann & Lehnhoff, 2005), while other research suggest the opposite (Wearden, 2016). We found that boredom proneness was positively associated with subjective idle time ($B = 0.39$, $SE = 0.09$, 95% CI [0.22; 0.56]; see Model 2 in Table 2 and Figure 1). The effect of boredom proneness on subjective idle time remained after controlling for all personality dimensions and coping styles (see Model 3 in Table 2) and age (see Model 4 in Table 2). When controlling for boredom proneness, none of the personality dimensions and coping styles were significantly associated with subjective idle time (see Table 2). We found that age was negatively associated with subjective idle time ($B = -0.01$, $SE = 0.01$, 95% CI [-0.02; -0.00]) beyond all other dispositions (see Model 4 in Table 2).

Because faster employees experience more idle time in relation to the task duration, they may appraise idle time stronger and experience more negative consequences. Therefore, the speed at which participants completed the survey may have influenced the effects of idle time on well-being outcomes. We examined the survey duration before the experimental manipulation (a) as a direct influence on subjective idle time, (b) as a moderator of the a- and b-paths, and (c) as a moderator of the a-path only. In summary of the results, we found no significant direct effects on subjective idle time (Model a), or the data did not fit the models (b and c) and therefore should not be interpreted. The results are presented in Table S13 in the OSM. Additionally, we examined whether idle time affected speed after the experimental manipulation to investigate whether participants worked slower after experiencing idle time (Brodsky & Amabile, 2018; Schubert et al., 2023). We conducted a multiple regression, using the experimental conditions and speed before the manipulation as predictors and speed after the experimental manipulation as the outcome. We found no significant results ($p > .05$, see Table S14 in the OSM).

AET proposes that events first elicit an appraisal in individuals that results in an affective response that then influences job or task satisfaction. To better describe the relationship between

affect and task satisfaction as describes in AET, we calculated a sequential mediation model in which objective idle time predicted subjective idle time, in turn predicting the four facets of affect, which in turn predicted task satisfaction. However, the model had to be discarded due to poor model fit ($\chi^2(32, N = 338) = 345.633, p < .001, CFI = .841, RMSEA = .173, SRMR = .084$, see Table 15 in the OSM).

Finally, because we measured subjective idle time, affect, and task satisfaction at the same time, we wanted to rule out the possibility that their relationship is the opposite of what we expected, and that affect and task satisfaction mediate the effect of objective on subjective idle time. To this end, we tested a model in which we used the outcomes of the original model as mediators (controlled for their respective baseline values) and subjective idle time as the outcome. This model fit the data worse than our hypothesized model ($\chi^2(35, N = 338) = 363.331, p < .001, CFI = .834, RMSEA = .167, SRMR = .080$, see Table S16 in the OSM).

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