Why Passionate Employees Can Have It All:
Passion Lowers Time Stress by Enhancing Goal Integration

Jon M. Jachimowicz

Columbia Business School

Ashley Whillans

Harvard Business School

Abstract

Passionate employees seem to effortlessly juggle numerous work commitments and devote vast amounts of time and energy to the advancement of their goals. Past research suggests that this dedication improves the productivity of passionate employees. However, it is unclear how employees' work passion promotes their resolve. We propose that employees' passion for work reduces how much time pressure they perceive, providing them with the feeling that they have sufficient time to accomplish their goals. This occurs, we suggest, because employees' passion for work integrates seemingly disparate work-related ambitions within one common drive. To provide evidence for this hypothesis, we conducted four studies, including two field studies with employees at a technology and financial services company, and two pre-registered experimental studies ($N = 3,321$). Our results reveal why passionate employees attain better outcomes, and help to shed light on when and why their passion for work is likely to incur productivity benefits.

Keywords: passion, time stress, goal conflict, goal integration

Highlights

- We find that passion for work helps employees view their goals as more integrated.

- As a result, passionate employees feel less pressed for time.

- Experiencing less time stress allows passionate employees to pursue their goals.

- These findings help to explain why passion confers workplace productivity benefits.

A hallmark characteristic of passionate individuals is that they dedicate a lot of their time and energy to their work. A passionate employee might spend additional time in tasks outside her job description. Meanwhile, a passionate academic might publish the most papers and present at the most conferences—yet, she may still have a seemingly endless amount of time for casual coffee meetings with her colleagues. Supporting these anecdotal claims, previous research has shown that passionate athletes (Vallerand et al., 2008), musicians (Bonneville-Roussy, Lavigne, & Vallerand, 2011), and actors (Vallerand et al., 2007) spend more time and energy pursuing their goals as compared to their less passionate peers. Passionate individuals therefore seem to have it all—they do not appear tired or stressed— and they are often able to invest an extraordinary amount of time and energy devoted to their work.

But how do passionate employees do it? While previous research has shown that passion confers workplace productivity benefits, such as increased perseverance (Duckworth, Peterson, Matthews, & Kelly, 2007), job satisfaction (Burke & Fiksenbaum, 2009), engagement (Ho & Astakhova, 2017) and proactive work behaviors (Ho, Wong, & Lee, 2011), a recent review of the literature notes that it is unclear why work passion promotes these positive outcomes (Perrewé, Hochwarter, Ferris, Mcallister, & Harris, 2014). Consequently, the current research seeks to uncover one way through which passion for work might help employees attain greater productivity: by reducing how much time pressure that employee *perceives*. Our core proposition is that more passionate employees view their varied goals as less conflicting and more integrated, which alters more passionate employees' time perception. Specifically, more passionate employees feel less time stress, allowing them to devote more time in the pursuit of their goals. In the following sections, we unpack each component of this proposition.

Although every employee only has 24 hours in a day, prior research has found that the same time span can be experienced as subjectively shorter or longer by different people (Frederickson & Kahneman, 1993; Read & Loewenstein, 1995). Furthermore, when employees decide whether or not to engage in a particular course of action at work, what frequently matters more than how much time they *objectively* have is how pressed for time they *subjectively* feel. Previous studies have shown that people are less likely to engage in activities that they care about when they feel pressed for time (Kasser & Sheldon, 2009; King, Hicks, & Abdelkhalik, 2009; Rudd, Vohs, & Aaker, 2012), even when they find these activities to be highly meaningful, such as volunteering (DeVoe & Pfeffer, 2011) or helping the environment (Whillans & Dunn, 2015; see Mogilner, Whillans, & Norton, 2018 for a recent review). For example, in a landmark study, seminary students who were in a rush were significantly less likely to assist a person who was suffering than students who were not (Darley & Batson, 1973). Consequently, time stress—the feeling of having too many things to do and not enough time to do them (Kasser & Sheldon, 2009)—often stands in an individual's way of pursuing personally important goals.

In proposing why passion for work can reduce employees' feelings of time stress, we draw on prior research showing that employees often feel pressed for time due to the intensity of their various role demands at work (Jex & Britt, 2014). Employees often juggle multiple roles in the workplace, and when the goals associated with employees' roles are insufficiently integrated, they feel more pressed for time (Kasser & Sheldon, 2009; Perlow, 1999). For example, one study found that the more goals a person had that were in conflict with each other, the more individuals perceived their time as scarce (Etkin, Evangelidis, & Aaker, 2015). These feelings of time stress could have detrimental consequences for how employees spend their time: employees may engage in fewer work activities because their conflicting goals make them feel that they do not have enough time. In contrast, employees whose goals

at work are more integrated and less in conflict could experience reduced time stress and feel more empowered to engage in work activities that they care about.

We suggest that work passion reduces employees' time stress because it ameliorates goal conflict, helping employees see the varied aspects of their work roles through the common drive of what they care about. This proposition rests on prior research which has found that identity plays a central role in passion for work (Cardon, Wincent, Singh, & Drnovsek, 2009; McAllister, Harris, Hochwarter, Perrewé, & Ferris, 2016; Perrewé et al., 2014). In previous conceptualizations, passion has been defined as the engagement in "tasks and activities that hold identity meaning" (Cardon et al., 2009, p. 521), or as an "intense affective state accompanied by cognitive and behavioral manifestations of high personal value" (Chen, Yao, & Kotha, 2009, p. 201). Because work passion is tied to activities that are important to the self, employees' passion for work therefore becomes integrated into their identity (Fauchart & Gruber, 2011; Murnieks, Cardon, Sudek, White, & Brooks, 2016; Perrewé et al., 2014; Vallerand et al., 2003).

Viewed from this perspective, identity and work passion are inextricably linked, each forming part of the other. Employees with higher levels of passion for work may thus be more likely to view the disparate roles and goals of their work lives through the perspective of their passion, which could help them to organize these goals into a hierarchical representation (Bagozzi & Dholakia, 1999; Carver & Scheier, 1996; Vallacher & Wegner, 1987). That is, the same action at work could be identified through different perspectives, depending on the level of passion individuals experience. Two different employees may therefore associate the engagement in the same work task differently (Tubbs & Ekeberg, 1991). Throughout this process, seemingly incongruent activities may take on passion-related relevance for passionate employees, who might come to view these aspects as jointly furthering a common goal (van Dierendonck, Rodríguez-Carvajal, Moreno-Jiménez, &

Dijkstra, 2009). In doing so, passionate employees may view their goals as more integrated and less conflicting, in turn reducing their time stress (Etkin et al., 2015).

Consider this relevant academic example: a professor may simultaneously have to juggle the roles of teacher, advisor, colleague, university employee, and researcher. These roles may often seem to be in conflict with each other, competing for time and attention, giving a professor the feeling that she is pressed for time. On a typical workday, a professor may have to teach a class, meet with a doctoral student, help a colleague on a revision, attend a committee, write a grant proposal, and edit a manuscript. This professor may conclude that these disparate activities are unrelated to, or even at odds with each other, giving her the feeling that she does not have enough time to adequately complete any of them.

In contrast, a highly passionate professor may feel less time pressure because she views these seemingly unrelated tasks as jointly helping to further her passionately held long-term goals at work; she may perceive meeting with a doctoral student, helping a colleague, attending a committee meeting, and editing a manuscript as compatible goals with relation to pursuing her work-related goals. As a consequence, a highly passionate professor may experience reduced time stress, and perhaps feel that she is able meet one of the students in her class for a cup of coffee; and their discussion may spark her next great research idea.

In sum, we suggest that passionate employees are able to devote more time and energy—and attain more desirable outcomes—because they feel less time stressed as a result of increased goal integration and reduced goal conflict (Etkin et al., 2015; van Dierendonck et al., 2009). To provide support for this proposition, we conducted two field studies and two pre-registered experimental studies. Figure 1 summarizes the conceptual model.

Insert Figure 1 about here

Overview of Studies

In Study 1a, we surveyed employees at a technology company ($N = 1,287$) to assess the relationship between passion for work, goal conflict, and time stress. In Study 1b, we surveyed employees at a financial services company ($N = 1,263$) to examine whether passion reduces goal conflict by promoting greater goal integration. In addition, because some studies find a positive relationship between passion and positive affect (Cardon et al., 2009; Mageau & Vallerand, 2007; Vallerand et al., 2003), and because positive affect and time stress are linked (Kasser & Sheldon, 2009), we control for positive (and negative) affect in this study to highlight that passion reduces time stress above and beyond any effects of passion on positive affect. In Studies 2a and 2b, we conducted two pre-registered experimental studies to provide causal evidence for this proposition. In Study 2a, we designed an experimental study ($N = 376$) which tested whether higher passion lowered goal conflict and time stress (consistent with Study 1a). In Study 2b, we designed an experimental study ($N = 395$) which assessed whether higher passion increased goal integration, and lowered goal conflict and time stress (consistent with Study 1b).

<div align="center">

Study 1a

</div>

Methods

Participants and Procedure. The study was conducted with employees of a technology company located in a Spanish-speaking country. Employees were contacted by an email sent out by the first author, which contained a link to the survey hosted on Qualtrics.com. Prior to this email, the company's Human Resources department asked employees to take part in a study conducted by the first author. Employees were guaranteed that their responses would be kept entirely confidential, and that their employer would not have access to any of their responses. The email was sent out to all the firm's 2,293 employees and 178 emails bounced back. We received survey data from 1,287 employees

(response rate: 60.85%; (M_{age} = 32.20, SD_{age} = 7.71, 40.64% female, mean tenure = 55.87 months). Given the company's location, we used the translation procedure outlined by Schaffer and Riordan (2003) to adapt our measures to Spanish.

Work Passion. We measured employees' passion for work with a three-item scale (Jachimowicz, Lu, & Galinsky, 2017; α = .95). The three items were, "I have a desire to engage in activities at work that reflect what is important to me," "I crave opportunities at work to act out values that matter to me," and "I am motivated to enact what is significant to me at work."

Goal Conflict. We measured goal conflict with three items adapted from Etkin et al. (2015; α = .78). The three items were, "I often feel as if my goals are in conflict with each other," "My goals compete for time and attention," and "Pursuing one goal frequently means I can't pursue another."

Time Stress. We measured time stress with two items adapted from Etkin et al. (2015; r = .67). The two items were, "I am often in a rush/hurry" and "I frequently feel as if I do not have enough time."

Insert Table 1 about here

Results and Discussion

Table 1 contains the descriptive statistics and correlations of the study variables. We first regressed passion on goal conflict and found a statistically significant negative relationship (B = -.26, SE = .05, p < .001), such that higher passion was associated with significantly lower goal conflict. We also regressed passion on time stress and found a statistically significant negative relationship (B = -.29, SE = .06, p < .001), such that higher levels of passion were associated with lower time stress. We next specified a mediation

analysis with passion as the independent variable, goal conflict as the mediator, and time stress as the dependent variable. Bootstrapping with 5,000 samples revealed a significant indirect effect ([-.270; -.122]), such that passion reduced time stress by decreasing goal conflict.

This study provides initial evidence that higher levels of passion for work reduces goal conflict and time stress. Thus, Study 1a provides tentative correlational evidence for our hypothesis. However, from this study, it is unclear why work passion is related to lower goal conflict and time stress. Next, we conducted Study 1b to investigate whether goal integration links work passion and goal conflict. This enables us to test our full conceptual model outlined in Figure 1.

Study 1b

Methods

Participants and Procedure. The study was conducted with employees of a financial services company located in a Spanish-speaking country. Employees were contacted by an email sent out by the company's Human Resources department. In this email, employees were informed that their responses would be kept entirely confidential, and that their employer would not have access to any of their responses. The email was sent out to all the firm's 2,394 employees. We received survey data from 1,263 employees (response rate: 52.76%; $M_{age} = 32.15$, $SD_{age} = 9.52$, 48.93% female, mean tenure = 6.87 years). Items were back-translated from English to Spanish (Schaffer & Riordan, 2003).

Work Passion. We measured employees' passion for work with the same three-item scale as in Study 1a. Responses were collected on a 7-point Likert scale ($\alpha = .77$).

Goal Integration. We measured goal integration adapting a method developed by Dierendonck et al. (2009). We first asked participants to list their personal strivings, defined as "the things that you typically or characteristically are trying to do in your everyday life,"

that would last "at least through the next 3 to 6 months." Now being aware of their specific (personally important) strivings, participants were asked how much each striving supported or hindered them in achieving the other striving. The scale ranged from –2 (very harmful) to 2 (very helpful). We computed a goal integration score by summing these ratings (α = .91).

Goal Conflict. Goal conflict was assessed using the same three-item scale as in Study 1a (α = .72).

Time Stress. We measured time stress with the same two-item scale as in Study 1a (r = .57).

Control Variables. We also measured employees' age, gender, and how many months they worked in the organization (tenure).

Insert Table 2 about here

Results and Discussion

Table 2 contains the descriptive statistics and correlations of study variables[1]. We first regressed work passion on goal integration and found a statistically significant positive relationship (B = .26, SE = .03, p < .001), such that that higher work passion was associated with higher goal integration. We also regressed work passion on goal conflict and found a statistically significant negative relationship (B = -.26, SE = .05, p < .001), such that higher passion for work was associated with lower goal conflict. Similarly, we regressed work

---

[1] Because of their conceptual similarities, one may consider integrating goal integration and goal conflict into one scale. However, this approach is not borne out by our data, as a two-factor model with each scale item loading on their respective factor has good fit indices (X^2(26) = 281.63, RMSEA = .085, CFI = .956, SRMR = .029). We compared this model to a model where we loaded items from both measures on one common factor. This model fit the data worse: X^2(27) = 805.99, RMSEA = .145, CFI = .867, SRMR = .093. Additionally, the fit of the first model was significantly better: ΔX^2 = 524.37, Δdf = 1, p < .001. We conclude that goal integration and goal conflict are two separate factors, and in subsequent analyses treat them as such.

passion on time stress and found a statistically significant negative relationship ($B = -.35$, $SE = .05$, $p < .001$), such that higher passion for work was associated with lower time stress.

Finally, we conducted a serial mediation of passion for work → goal integration → goal conflict → time stress. Bootstrapping with 5,000 samples revealed a significant indirect effect ([-.073; -.029]), such that higher passion reduced time stress through a serial mediation travelling via goal integration and goal conflict.

Discussion

Taken together, Studies 1a and 1b provide correlational evidence in two large field studies that passion for work reduces perceived time stress. The studies also provide tentative insights into one underlying mechanism of this relationship: passionate employees report higher levels of goal integration and reduced goal conflict, which combine to predict lower time stress. However, because of the correlational nature of these two studies, we next conducted two pre-registered experimental studies to provide causal evidence for the relationship between passion and time stress, and one of its' underlying mechanisms.

<div align="center">

Study 2a

</div>

Methods

Participants and Procedure. We surveyed 376 full-time employees recruited from Amazon's Mechanical Turk ($M_{Age} = 35.59$, $SD_{Age} = 10.12$, 46.01% female). A wealth of research has demonstrated the validity of the MTurk platform, as its' participant pool is not only more representative of the general U.S. population (Paolacci, Chandler, & Ipeirotis, 2010), but also demographically more diverse than traditional student samples, as well as other online samples (Goodman, Cryder, & Cheema, 2013). Participants qualified only if they were full-time employees, located in the United States, had a non-duplicate IP address, and had an approval rate above 95% for their previous HITs on MTurk.

We pre-registered Study 2a (http://aspredicted.org/blind.php?x=vw9rb5). In the pre-registration, we specified that we would exclude participants who (a) self-identified that we

should not use their response because they did not have an adequate experience for the

manipulation, and (b) those that failed an attention check. After excluding those participants,

the final sample size was 292[2].

Passion Manipulation. Participants in the *passion* condition were asked, "Please take

a moment and reflect on a time you felt passion at work. Please describe how you felt and

acted during this time you felt passion." Participants in the *control* condition were asked,

"Please take a moment and reflect on your day at work yesterday."

Goal Conflict. We measured goal conflict with the same three item scale used in

Studies 1a and 1b. Responses were collected on a 7-point Likert scale (1 = *strongly*

disagree = strongly agree, $\alpha = .86$).

Time Stress. We measured time stress with four items adapted from Etkin et al.

(2015), e.g. "I frequently feel as if I do not have enough time." Responses were collected on a

7-point Likert scale (1 = *strongly disagree = strongly agree,* $\alpha = .93$).

Manipulation Check. We measured work passion as a manipulation check using the

same three item scale as in Studies 1a and 1b. Responses were collected on a 7-point Likert

scale (1 = *strongly disagree = strongly agree,* $\alpha = .89$).

Control Variables. We also measured participants' age, gender, tenure, how many

hours per week they worked, their level of income, and levels of positive and negative affect

(PANAS; Watson, Clark, & Tellegen, 1988)

Insert Table 3 about here

Results

---

[2] There were no significant differences in age, gender, or tenure between the full sample and the subset.

Manipulation Check. Participants in the *passion* condition indicated higher levels of passion ($M = 6.03$, $SD = .95$) than participants in the *control* condition ($M = 4.94$, $SD = 1.29$; $t(290) = 8.00$, $p < .001$, $d = .97$). Thus, we can conclude that the manipulation was successful.

Goal Conflict. Participants in the *passion* condition indicated lower levels of goal conflict ($M = 3.59$, $SD = 1.70$) than participants in the *control* condition ($M = 4.07$, $SD = 1.48$; $t(290) = 2.58$, $p = .01$, $d = .30$). This result remains statistically significant when including the control variables ($B = -.41$, $SE = .18$, $p = .024$).

Time Stress. There was no significant difference on time stress for participants in the *passion* condition ($M = 4.76$, $SD = 1.50$) in comparison to participants in the *control* condition ($M = 4.78$, $SD = 1.53$; $t(290) = .12$, $p = .90$, $d = .01$).

Indirect Effect on Time Stress through Goal Conflict. We next tested whether the indirect effect of passion on time stress via goal conflict was significant (Preacher & Hayes, 2008). We specified a mediation analysis with condition as the independent variable, goal conflict as the mediator, and time stress as the dependent variable, and found that the indirect effect was significant because the confidence interval excluded zero ([-.399; -.057]; 5,000 bootstrapped iterations). Thus, work passion reduced goal conflict, which in turn lowered feelings of time stress.

Study 2a provides tentative experimental evidence that work passion causally reduces feelings of goal conflict, which in turn can reduce employees' feelings of time stress. We next turn to Study 2b which additionally investigated whether an experimental manipulation of work passion reduces goal conflict by increasing goal integration in turn lowering employees' feelings of time stress (see Figure 1).

Study 2b

Methods

Participants and Procedure. We surveyed 395 full-time employees recruited from Amazon's Mechanical Turk (M_{Age} = 36.73, SD_{Age} = 10.58, 52.78% female). The exclusion criteria were the same as in Study 2a. We pre-registered Study 2b (http://aspredicted.org/blind.php?x=dv5h5d), and specified that we would exclude participants who self-identified that we should not use their response because they did not have an adequate experience for the manipulation or failed the attention check. The final sample size was 287[3].

Passion Manipulation. Participants in the *passion* condition were asked, "Please take a moment and reflect on a time you felt passion at work. Please describe how you felt and acted during this time you felt passion." Participants in the *control* condition were asked, "Please take a moment and reflect on your day at work yesterday."

Goal Integration. We measured goal integration using the same scale as in Study 1b (α = .74).

Goal Conflict. We measured goal conflict using the same three-item scale as in previous studies (α = .84).

Time Stress. We assessed time stress with the same four-item scale as in Study 2a (α = .93).

Control Variables. We also participants' age, gender, tenure, how many hours per week participants worked, their level of income, and levels of positive and negative affect (PANAS; Watson, Clark, & Tellegen, 1988).

Insert Table 4 about here

Results

---

[3] There were no significant differences in age, gender, or tenure between the full sample and the subset.

Manipulation Check. Participants in the *passion* condition indicated higher levels of passion ($M = 6.17$, $SD = .80$) than participants in the *control* condition ($M = 5.38$, $SD = 1.15$; $t(285) = 6.70$, $p < .001$, $d = .79$). Thus, we can conclude that the manipulation was successful.

Goal Integration. Participants in the *passion* condition indicated higher levels of goal integration ($M = 0.76$, $SD = 0.65$) than participants in the *control* condition ($M = 0.56$, $SD = 0.73$; $t(285) = 2.38$, $p = .018$, $d = .28$).

Goal Conflict. Participants in the *passion* condition also indicated lower levels of goal conflict ($M = 3.34$, $SD = 1.35$) than participants in the *control* condition ($M = 3.74$, $SD = 1.42$; $t(285) = 2.58$, $p = .014$, $d = .29$).

Time Stress. There was no significant difference on time stress for participants in the *passion* condition ($M = 4.77$, $SD = 1.47$) in comparison to participants in the *control* condition ($M = 4.75$, $SD = 1.69$; $t(285) = .13$, $p = .90$, $d = .02$).

Serial Mediation on Time Stress. We next tested the serial mediation of passion on time stress through both goal integration and goal conflict. Analysis reveals that the indirect path condition → goal integration → goal conflict → time stress is significant ([-.259; -.023]; 5,000 bootstrapped samples). Thus, the passion manipulation reduced time stress through an indirect path via goal integration and goal conflict. Stated differently, to the extent that passion increased goal integration and reduced goal conflict, passion for work in turn reduced feelings of time stress.

Discussion

Consistent with the results of the prior studies, Studies 2a and 2b provide causal evidence from two pre-registered experimental studies that work passion reduces time stress by promoting goal integration and reducing goal conflict.

General Discussion

Four correlational and experimental studies from the lab and field provide consistent support for the notion that passionate employees experience reduced time stress because their goals are more integrated and in less conflict. Previous studies highlight that passion helps guide individuals to pursue valuable and important goals (Cardon et al., 2009; Chen et al., 2009; Vallerand et al., 2003). Research also suggests that passion can help people experience a greater perception that work is in harmony with other aspects of their identity (Vallerand et al., 2003). Building on these results, we find that passion for work can provide employees with the feeling that their goals are more integrated and less in conflict, which in turn, reduces feelings of time stress. In addition, while the majority of research examining passion for work has relied on correlational designs, we show that these feelings of passion at work can be manipulated using simple recollection paradigms—with similar downstream benefits.

Reduced time stress matters because it is a key predictor in the engagement in meaningful activities at work. For example, we additionally measured organizational citizenship behaviors in Study 1a (OCBs; e.g., "I help others who have been absent"; Williams & Anderson, 1991) and we found that time stress was a significant predictor of employees' engagement in OCB ($B = -.08$, $SE = 0.02$, $p < .001$; a mediation from passion to OCB via time stress was also significant, [.002; .023]; 5,000 bootstrapped samples). These results are in line with previous studies showing that individuals frequently decide whether to engage in an activity based on how pressed for time they feel (DeVoe & Pfeffer, 2011; Kasser & Sheldon, 2009; King et al., 2009; Mogilner et al., 2018; Rudd et al., 2012).

Reduced time stress also matters because feelings of time scarcity can impact decision-making. For example, individuals who feel pressed for time tend to make decisions that result in suboptimal outcomes—such as by making decisions that result in smaller, immediate gains and larger, more distal costs (Shah, Mullainathan, & Shafir, 2012). Furthermore, the feeling of having too many things to do and not enough time to do them can

contribute to poor health, including insomnia, anxiety, depression, and feelings of work-life

conflict (Strazdins, Welsh, Korda, Broom, & Paolucci, 2016). Consequently, time pressure at

work might lead employees to make daily decisions that result in long-term negative

outcomes for skill-acquisition and performance, while also contributing to poorer health

outcomes—which in and of themselves can incur productivity costs. Overall, the current

research sheds novel insight into why passionate employees are able to dedicate so much

time and effort, which in turn allows them to attain the positive outcomes that have been

documented in numerous other studies (Perrewé et al., 2014).

Theoretical and Empirical Contributions

In the current research, we propose a novel explanation for why work passion boosts

employees' outcomes: we suggest and find that passion for work alters employees' subjective

experience of time. While some previous research has focused on the role of positive

emotions in increasing time affluence (Kasser & Sheldon, 2009), we find that beyond the

positive or negative affect that people experience, greater passion for work helps employees

feel as if their goals are more integrated, in turn reducing the amount of time stress they feel.

This also has implications for turnover intentions, as greater time pressure has previously

been associated with employees' greater desire to quit their jobs (Janssen, De Jonge, &

Bakker, 1999). Boosting employees work passion could also reduce turn over intentions. In

addition, understanding the mechanisms involved in reducing perceived time stress is

important not only for workplace productivity but also more broadly for promoting subjective

well-being. For example, higher time stress is linked to negative health outcomes including

distress and depression (Roxburgh, 2004), sleep problems, health dissatisfaction (Zuzanek,

2005), and psychosomatic symptoms, such as headaches, and digestive disturbances (Hoege,

2009). The current investigation therefore provides a theoretical underpinning for a growing

body of empirical research showing that passion positively predicts several aspects of

subjective well-being (Bélanger, Pierro, & Kruglanski, 2015; Fernet, Lavigne, Vallerand, & Austin, 2014; Forest, Mageau, Sarrazin, & Morin, 2011).

The current research also contributes to the organizational behavior literature by highlighting why long work hours might not necessarily result in negative health outcomes, or come at a cost to productivity. For example, past research has found that employees who are motivated to work because they view their job as matching their values are more likely to experience better psychological health and greater work satisfaction, regardless of the hours that they work (Burke & Fiksenbaum, 2009). Prior studies have also found that passion for work is negatively related to stress and burn-out (Bélanger et al., 2015). Expanding on this line of research, the current paper provides evidence for a novel mechanism for why passion for work promotes these positive outcomes: by helping employees experience greater goal integration, less goal conflict, and reduced feelings of time stress, passionate employees are better protected against the demands of their dedication.

Limitations and Future Directions

One limitation of the current research is the non-significant direct effect between passion and time stress in Studies 2a and 2b. However, past research suggests that participants on Amazon's Mechanical Turk think about time and money in very different ways from the general population (DeVoe & House, 2016). Indeed, the lack of a direct effect in our experimental studies is consistent with previous studies investigating the psychology of time, which often find differences between research conducted in the laboratory and the field (DeVoe & House, 2016; Whillans, Dunn, Smeets, Bekkers, & Norton, 2017; Whillans, Weidman, & Dunn, 2016). Future research should replicate these experimental studies with non-Mturk samples, and use both momentary and global measures of time stress.

The current research focused on employees' passion for work, and examined how work passion impacted feelings of goal integration and goal conflict, with implications for

perceived time pressure. Future research may consider examining how employees' passion for activities *outside* of work influence how they experience their goals and time stress *at work*. It is possible that employees who pursue activities they are passionate about outside of work may experience similar benefits for their pursuit of work-related goals, as this helps provide a hierarchical goal representation that structures their day-to-day tasks (Tubbs & Ekeberg, 1991; Vallacher & Wegner, 1987). At the same time, it is also conceivable that the pursuit of non-work-related passion may increase employees time stress, as the conflict between their work and non-work life is more salient (Edwards & Rothbard, 2000). Further investigation is thus needed to uncover how the pursuit of non-work-related passions influences employees subjective experience of time.

In addition, one recent review proposes employees' experience of work is also shaped by the extent to which they view their work as a means to fulfil their needs (Green, Finkel, Fitzsimons, & Gino, 2017). That is, for employees who seek a higher needs-fulfillment through work, the pursuit of passion for work may be particularly critical in their attainment of subjective well-being. In contrast, for employees who seek less needs fulfilment through work, their passion for work may be less important in predicting well-being outcomes. Instead, the pursuit of passion for other domains of their life—such as, towards their family (Menges, Tussing, Wihler, & Grant, 2017) or their hobbies (Berg, Grant, & Johnson, 2010), might be more fundamental for shaping positive outcomes. Future research should explore the extent to which passion for work and outside of work interact to promote positive psychological outcomes.

Lastly, the findings of the current research may be especially important because the engagement in activities that people care about may further fuel feelings of passion (Jachimowicz, To, Menges, & Akinola, 2017). As Jean-Paul Sartre said, "we must act out passion before we can feel it." To the extent that time pressure prevents people from

engaging in meaningful activities, these feelings of time stress might prevent people from discovering their passions in the first place.

In sum, the current work provides the first empirical evidence that passion for work can protect employees from negative feelings of time stress, with potential implications for job satisfaction, health, and well-being.

Author Contributions

J.J. and A.W. designed research, J.J. analyzed data and wrote the paper and A.W.

provided critical revisions. The authors declare no conflict of interest.

References

Bagozzi, R. P., & Dholakia, U. (1999). Goal Setting and Goal Striving in Consumer

   Behavior. *Journal of Marketing*, *63*, 19–32.

Bélanger, J., Pierro, A., & Kruglanski, A. (2015). On feeling good at work: the role of

   regulatory mode and passion in psychological adjustment. *Journal of Applied Social

   Psychology*, *45*(6), 319–329.

Berg, J. M., Grant, A. M., & Johnson, V. (2010). When Callings Are Calling: Crafting Work

   and Leisure in Pursuit of Unanswered Occupational Callings. *Organization Science*,

   21(5), 973–994.

Bonneville-Roussy, A., Lavigne, G. L., & Vallerand, R. J. (2011). When passion leads to

   excellence: The case of musicians. *Psychology of Music*, *39*(1), 123–138.

Burke, R. J., & Fiksenbaum, L. (2009). Work motivations, work outcomes, and health:

   Passion versus addiction. *Journal of Business Ethics*, *84*, 257–263.

Cardon, M. S., Wincent, J., Singh, J., & Drnovsek, M. (2009). The nature and experience of

   entrepreneurial passion. *Academy of Management Review*, *34*(3), 511–532.

Carver, C. S., & Scheier, M. F. (1996). *On the Self Regulation of Behavior*. New York, NY:

   Cambridge University Press.

Chen, X. P., Yao, X., & Kotha, S. (2009). Entrepreneur passion and preparedness in business

   plan presentations: A persuasion analysis of venture capitalists' funding decisions.

   Academy of Management Journal, *52*(1), 199–214.

Darley, J. M., & Batson, C. D. (1973). "From Jerusalem to Jericho": A study of situational

   and dispositional variables in helping behavior. *Journal of Personality and Social

   Psychology*, *27*(1), 100–108.

DeVoe, S. E., & House, J. (2016). Replications with MTurkers who are naive versus

   experienced with academic studies: A comment on Connors, Khamitov, Moroz,

Campbell, and Henderson (2015). *Journal of Experimental Social Psychology*, *67*, 65–67.

DeVoe, S. E., & Pfeffer, J. (2011). Time Is Tight: How Higher Economic Value of Time Increases Feelings of Time Pressure. *Journal of Applied Psychology*, *96*(4), 665–676.

Duckworth, A. L., Peterson, C., Matthews, M. D., & Kelly, D. R. (2007). Grit: Perseverance and passion for long-term goals. *Journal of Personality and Social Psychology*, *92*(6), 1087–1101.

Edwards, J. R., & Rothbard, N. P. (2000). Mechanisms linking work and family: Clarifying the relationship between work and family constructs. *Academy of Management Review*, *25*(1), 178–199.

Etkin, J., Evangelidis, I., & Aaker, J. (2015). Pressed for time? Goal conflict shapes how time is perceived, spent, and valued. *Journal of Marketing Research*, *52*(3), 394–406.

Fauchart, E., & Gruber, M. (2011). Darwinians, communitarians, and missionaries: The role of founder identity in entrepreneurship. *Academy of Management Journal*, *54*(5), 935–957.

Fernet, C., Lavigne, G. L., Vallerand, R. J., & Austin, S. (2014). Fired up with passion: Investigating how job autonomy and passion predict burnout at career start in teachers. *Work and Stress*.

Forest, J., Mageau, G. A., Sarrazin, C., & Morin, E. M. (2011). "Work is my passion": The different affective, behavioural, and cognitive consequences of harmonious and obsessive passion toward work. *Canadian Journal of Administrative Sciences*, *28*(1), 27–40.

Frederickson, B., & Kahneman, D. (1993). Duration Neglect in Retrospective Evaluations of Affective Episodes. *Journal of Personality and Social Psychology*, *65*, 44–55.

Goodman, J. K., Cryder, C. E., & Cheema, A. (2013). Data Collection in a Flat World: The

Strengths and Weaknesses of Mechanical Turk Samples. *Journal of Behavioral Decision Making*, *26*(3), 213–224.

Green, P. I., Finkel, E. J., Fitzsimons, G. M., & Gino, F. (2017). The energizing nature of work engagement: Toward a new need-based theory of work motivation. *Research in Organizational Behavior*, *37*, 1–18.

Ho, V. T., & Astakhova, M. N. (2017). Disentangling passion and engagement: An examination of how and when passionate employees become engaged ones. *Human Relations*.

Ho, V. T., Wong, S. S., & Lee, C. H. (2011). A Tale of Passion: Linking Job Passion and Cognitive Engagement to Employee Work Performance. *Journal of Management Studies*, *48*(1), 26–47.

Hoege, T. (2009). When work strain transcends psychological boundaries: An inquiry into the relationship between time pressure, irritation, work-family conflict and psychosomatic complaints. *Stress and Health*, *25*(1), 41–51.

Jachimowicz, J. M., To, C., Menges, J. I., & Akinola, M. (2017). Passion Gaps: Why People Quit Their Job in Pursuit of Work Passion. *Working Paper*. Retrieved from https://psyarxiv.com/qj6y9

Janssen, P. P. M., De Jonge, J., & Bakker, A. B. (1999). Specific determinants of intrinsic work motivation, burnout and turnover intentions: A study among nurses. *Journal of Advanced Nursing*, *29*(6), 1360–1369. http://doi.org/10.1046/j.1365-2648.1999.01022.x

Jex, S. M., & Britt, T. W. (2014). *Organizational psychology: A scientist-practitioner approach*. John Wiley & Sons.

Kasser, T., & Sheldon, K. M. (2009). Time affluence as a path toward personal happiness and ethical business practice: Empirical evidence from four studies. *Journal of Business Ethics*, *84*, 243–255.

King, L. A., Hicks, J. A., & Abdelkhalik, J. (2009). Death, life, scarcity, and value: An alternative perspective on the meaning of death. *Psychological Science*, *20*(12), 1459–1462.

Mageau, G. A., & Vallerand, R. J. (2007). The moderating effect of passion on the relation between activity engagement and positive affect. *Motivation and Emotion*, *31*(4), 312–321.

McAllister, C. P., Harris, J. N., Hochwarter, W. A., Perrewé, P. L., & Ferris, G. R. (2016). Got Resources? A Multi-Sample Constructive Replication of Perceived Resource Availability's Role in Work Passion–Job Outcomes Relationships. *Journal of Business and Psychology*, 1–18.

Menges, J. I., Tussing, D. V., Wihler, A., & Grant, A. M. (2017). When Job Performance is All Relative: How Family Motivation Energizes Effort and Compensates for Intrinsic Motivation. *Academy of Management Journal*, *60*(2), 695–719.

Mogilner, C., Whillans, A., & Norton, M. (2017). Time, Money, and Subjective Well-Being. In E. Diener, S. Oishi, & L. Tay (Eds.), *Handbook of Well-Being*.

Murnieks, C. Y., Cardon, M. S., Sudek, R., White, T. D., & Brooks, W. T. (2016). Drawn to the fire: The role of passion, tenacity and inspirational leadership in angel investing. *Journal of Business Venturing*, *31*(4), 468–484.

Paolacci, G., Chandler, J., & Ipeirotis, P. G. (2010). Running experiments on Amazon Mechanical Turk. *Judgment and Decision Making*, *5*(5).

Perlow, L. A. (1999). The Time Famine: Toward a Sociology of Work Time. *Administrative Science Quarterly*, *44*(1), 57.

Perrewé, P. L., Hochwarter, W. A., Ferris, G. R., Mcallister, C. P., & Harris, J. N. (2014). Developing a passion for work passion: Future directions on an emerging construct. *Journal of Organizational Behavior*, *35*(1), 145–150.

Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, *40*(3), 879–891.

Read, D., & Loewenstein, G. (1995). Diversification Bias: Explaining the Difference Between Prospective and Real Time Taste for Variety. *Journal of Experimental Psychology: Applied*, *1*(1), 34–49.

Roxburgh, S. (2004). ''There just aren''t enough hours in the day': The mental health consequences of time pressure. *Journal of Health and Social Behavior*, *45*(2), 115–131.

Rudd, M., Vohs, K. D., & Aaker, J. (2012). Awe Expands People's Perception of Time, Alters Decision Making, and Enhances Well-Being. *Psychological Science*, *23*(10), 1130–1136.

Schaffer, B. S., & Riordan, C. M. (2003). A Review of Cross-Cultural Methodologies for Organizational Research: A Best-Practices Approach. *Organizational Research Methods*, *6*(2), 169–215.

Shah, A. K., Mullainathan, S., & Shafir, E. (2012). Some consequences of having too little. *Science (New York, N.Y.)*, *338*(6107), 682–5.

Strazdins, L., Welsh, J., Korda, R., Broom, D., & Paolucci, F. (2016). Not all hours are equal: Could time be a social determinant of health? *Sociology of Health and Illness*, *38*(1), 21–42.

Tubbs, M. E., & Ekeberg, S. E. (1991). The Role of Intentions in Work Motivation: Implications for Goal-Setting Theory and Research. *Academy of Management Review*, *16*, 180–199.

Vallacher, R. R., & Wegner, D. M. (1987). What do people think they're doing? Action identification and human behavior. *Psychological Review*, *94*(1), 3–15.

Vallerand, R. J., Blanchard, C., Mageau, G. A., Koestner, R., Ratelle, C., Léonard, M., …

Marsolais, J. (2003). Les passions de l'âme: On obsessive and harmonious passion. *Journal of Personality and Social Psychology*, *85*(4), 756–767.

Vallerand, R. J., Mageau, G. A., Elliot, A. J., Dumais, A., Demers, M. A., & Rousseau, F. (2008). Passion and performance attainment in sport. *Psychology of Sport and Exercise*, *9*(3), 373–392.

Vallerand, R. J., Salvy, S. J., Mageau, G. A., Elliot, A. J., Denis, P. L., Grouzet, F. M. E., & Blanchard, C. (2007). On the role of passion in performance. *Journal of Personality*, *75*(3), 505–534.

van Dierendonck, D., Rodríguez-Carvajal, R., Moreno-Jiménez, B., & Dijkstra, M. T. M. (2009). Goal integration and well-being: Self-regulation through inner resources in the Netherlands and Spain. *Journal of Cross-Cultural Psychology*, *40*(5), 746–760.

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, *54*(6), 1063–1070.

Whillans, A. V., & Dunn, E. W. (2015). Thinking about time as money decreases environmental behavior. *Organizational Behavior and Human Decision Processes*, *127*, 44–52.

Whillans, A. V., Dunn, E. W., Smeets, P., Bekkers, R., & Norton, M. I. (2017). Buying time promotes happiness. *Proceedings of the National Academy of Sciences*, *114*(32), 8523–8527.

Whillans, A. V., Weidman, A. C., & Dunn, E. W. (2016). Valuing Time Over Money Is Associated With Greater Happiness. *Social Psychological and Personality Science*, *7*(3), 213–222.

Williams, L. J., & Anderson, S. E. (1991). Job Satisfaction and Organizational Commitment as Predictors of Organizational Citizenship and In-Role Behaviors. *Journal of*

Management, *17*(3), 601–617.

Zuzanek, J. (2005). Work, leisure, time-pressure and stress. *Work and Leisure*, 123–144.

Figure 1

Conceptual Model
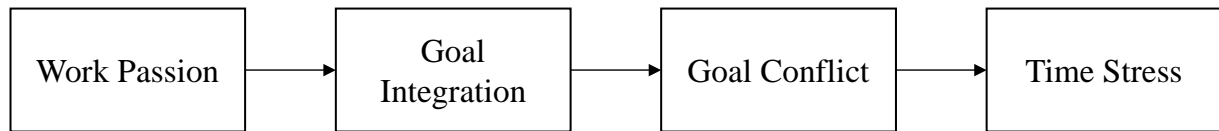
Table 1

Means, Standard Deviations, and Bivariate Correlations of Variables in Study 1a

Variable	M	SD	1	2	3	4	5
1 Age	32.19	7.70					
2 Gender (1 = female)	0.41	0.49	-.13**				
3 Tenure (in years)	4.66	9.09	.26**	-.06*			
4 Passion	6.36	0.84	.03	-.03	.01		
5 Goal Conflict	2.98	1.48	-.07*	-.06*	-.04	-.14**	
6 Time Stress	3.51	1.80	-.01	.05	-.03	-.14**	.59**

$*p < .05$; $**p < .01$.

Table 2

Means, Standard Deviations, and Bivariate Correlations of Variables in Study 1b

Variable	M	SD	1	2	3	4	5	6
1 Age	32.15	9.51						
2 Gender (1 = female)	0.49	0.51	.01					
3 Tenure (in years)	6.87	7.08	.65**	.03				
4 Passion	6.37	0.87	.03	-.01	.04			
5 Goal Integration	5.97	1.15	.02	-.06*	-.02	.19**		
6 Goal Conflict	2.98	1.41	-.06*	-.06*	-.02	-.21**	-.25**	
7 Time Stress	3.62	1.72	.06*	-.06*	.06*	-.17**	-.23**	.59**

$*p < .05; **p < .01.$

Table 3
Means, Standard Deviations, and Bivariate Correlations of Variables in Study 2a

	Variable	*M*	*SD*	1	2	3	4	5	6	7	8
1	Age	36.14	10.22								
2	Gender	1.45	0.50	.09							
3	Tenure	6.31	15.28	.35**	.08						
4	Hours Per Week	42.76	16.61	-.03	-.11	.00					
5	Income (in $10,000s)	5.92	4.32	.06	-.09	.05	.07				
7	Positive Affect	19.23	11.77	.21**	-.03	.07	.00	.19**			
8	Negative Affect	2.78	4.54	-.16**	-.05	.15**	-.05	.03	-.15*		
9	Goal Conflict	3.86	1.60	-.13*	.06	-.16**	.10	-.09	-.18**	.12*	
10	Time Stress	4.77	1.51	.03	.07	.04	.11	.01	-.08	.15*	.48**

Note. $* < .05$ $** < .001$

Table 4

Means, Standard Deviations, and Bivariate Correlations of Variables in Study 2b

	Variable	M	SD	1	2	3	4	5
1	Age	37.17	10.97					
2	Gender	1.57	0.50	.19**				
3	Tenure	5.47	5.58	.53**	.03			
4	Goal Integration	0.67	0.70	-.05	-.13*	-.10		
5	Goal Conflict	3.54	1.40	-.02	-.05	.08	-.33**	
6	Time Stress	4.76	1.58	.01	.14*	.02	-.18**	.46**

Note. * < . 05 ** < .001