European Journal of Applied Positive Psychology
Vol 5, Article 4, 2021
ISSN 2397-7116
www.nationalwellbeingservice.com/journals

RESEARCH PAPER

Does trait mindfulness help working college students get more satisfaction? The mediating role of work meaning and work-to-school enrichment

Laurel A. McNall[1], Matthew Bennett[1,2], and Melissa M. Brown[1]

Corresponding author

Laurel A. McNall, Department of Psychology, State University of New York (SUNY) Brockport, Brockport, NY 14420.
E-mail: lmcnall@brockport.edu

Affiliations

[1] Department of Psychology, State University of New York (SUNY) Brockport, USA
[2] Department of Psychology, University at Albany, SUNY, USA

Processing dates

Submitted 23 July 2020; Resubmitted 4 Oct 2020; Accepted 3 November 2020; Published 16 February 2021

New paper statement

I confirm that the paper has not been published elsewhere and is not under consideration in any other publication.

Funding

None

Declaration of conflicting interests

None

Acknowledgments

This research was previously presented at the Annual Meeting of the Academy of Management in Vancouver, Canada

Abstract

Background/Aims/Objectives: Research is providing compelling evidence on the benefits of mindfulness, but more work is needed to understand how and why mindfulness results in positive outcomes. Drawing on Mindfulness-to-Meaning Theory (MMT), we explored the underlying mechanisms that may explain the relationship between mindfulness and satisfaction (job and school) for working college students, including work meaning and work-to-school enrichment (WSE).

Method: Employed college students (who worked at least 8 hours per week) were recruited to participate in an online survey in exchange for credit.

Results: We found evidence for a serial multiple mediation model of work meaning and work-to-school enrichment in the relationship between mindfulness and school satisfaction. Yet, for job satisfaction, the simple mediation model involving mindfulness to work meaning was better than the serial model that included WSE.

Discussion: Taken together, these results lend initial support for mindfulness as a personal resource that helps working college students experience greater job satisfaction, particularly through higher work meaning, and greater school satisfaction, through both higher work meaning and WSE.

Conclusions: Practically speaking, this research suggests that mindful working college students may be better equipped to experience work meaning, and in turn, positive outcomes. As such, universities and organizations may want to consider not only offering mindfulness interventions, but also helping students find greater meaning in their employment experiences.

Keywords: mindfulness, work meaning, work-to-school enrichment, job satisfaction, school satisfaction

Mindfulness is the ability to be present in the moment through attention and awareness (Brown & Ryan, 2003). Individuals can vary in their baseline levels of mindfulness, but organizational scholars have demonstrated that mindfulness can also be fostered through interventions (e.g., Fortney et al., 2013; Roeser et al., 2013). As such, there is a growing interest in mindfulness as an important and robust tool for managing stress and fostering resilience, especially among college students (James, 2017). The American College Health Association (2015) found that 85 percent of college students felt overwhelmed by the demands of college. Indeed, mental health concerns for college students are on the rise (Crist, 2018). At the same time, college students are increasingly engaged in

paid employment, with 70 percent of full-time college students now working (St. Amour, 2019). Most students work between 15 to 35 hour per week, but low-income working students are more likely to work full-time hours (St. Amour, 2019). While organizational scholars have paid much attention to studying how working adults manage work and family demands, less attention has been paid to how students balance work and school demands (Cheng & McCarthy, 2013). Unfortunately, organizations and educational institutions have a small number of empirical studies to draw upon for supporting students who work (Calderwood & Gabriel, 2017). As such, it is critically important for positive organizational scholars to understand the process by which personal resources, such as mindfulness, can potentially help students experience greater work meaning, and thereby better outcomes as they manage work and school roles.

Morganson et al. (2015) urged researchers to examine mindfulness as a way to alleviate work-life stressors, but only a handful of studies have examined the link between mindfulness and work-life variables. Some of these initial mindfulness intervention studies show promise at reducing work-family conflict (e.g., Kiburz et al., 2017; Michel et al., 2014). However, to our knowledge, no studies have examined mindfulness within the context of the *work-school* interface. In addition, scholars have "recently shifted focus from asking *if* mindfulness improves well-being to *how* and *why* it results in change" (Christie et al., 2017, p. 368). As such, what are the underlying mechanisms by which mindfulness could positively impact working college students?

In the current study, we test the potential benefits of mindfulness through the lens of Mindfulness-to-Meaning Theory (MMT; Garland et al., 2015). Mindfulness might promote a sense of meaning in the face of adversity, and this may help the working college student experience greater benefits from multiple role memberships, or work-school enrichment (Butler & Matthews, 2009; Greenhaus & Powell, 2006), which is bi-directional in nature. In particular, researchers have examined the positive impact of participation in work on the quality of the school role (work-to-school enrichment; WSE) because so many working students view themselves as "students who work" rather than "employees who study" (Butler, 2007; McNall & Michel, 2011). Accordingly, the goal of the current study is to explore the possible serial mediation model of work meaning and WSE on the relationship between mindfulness and both job and school satisfaction.

In doing so, we provide an initial empirical test of the MMT (Garland et al., 2015), but also answer the call to examine the link between mindfulness and work-family experiences (Allen & Paddock, 2015). In general, the work-family literature has been more focused on conflict between work and family roles, whereas our research contributes not only to the newer, positive side of the work-family interface, but also answers the call to expand beyond "work-*family*" to the other life domains such as school. Moreover, Nicklin et al. (2018) urged researchers to empirically test *how* psychological resources like mindfulness may help employees (and by extension, working college students) thrive, and we examined two potential mediating mechanisms (work meaning and WSE).

MINDFULNESS AND WORK-SCHOOL ENRICHMENT

Over the past several decades, researchers have explored ways to minimize work-family conflict (i.e., when role demands stemming from one domain are incompatible with the role demands stemming from another domain; Greenhaus & Beutell, 1985), and a small number of studies have integrated the mindfulness literature with work-family conflict. For example, Michel et al. (2014) found that those in a mindfulness-based intervention group were better able to psychologically detach from work and experienced less strain-based work-family conflict. Similarly, Kiburz et al. (2017) found that a one-hour mindfulness-based workshop increased mindfulness and decreased work-to-family conflict (when work interferes with the family domain), but not family-to-work conflict (when family interferes with the work domain). Taken together, these studies have begun to show evidence that mindfulness may be a powerful tool to alleviate the stress of work-family conflict.

Fortunately, managing multiple life domains are not always a source of stress but may operate synergistically. There have been calls for a more balanced approach to understanding multiple role memberships by examining not only on the costs associated with student employment but also the benefits (Barling et al., 1995; Broadbridge & Swanson, 2005; Swanson et al., 2006). Greenhaus and Powell's (2006) theory of work-family enrichment has been extended to other roles beyond the family, including the school role (e.g., Nicklin et al., 2019). They proposed that "the generation of resources is a crucial driver of the enrichment process" (p. 80), and specified five categories of resources that may be acquired through various role experiences via an instrumental (direct) or affective path (indirect), including psychological resources like trait mindfulness.

European Journal of Applied Positive Psychology 2021, 5, Article 4 ISSN 2397-7116

Choo et al. (2019) argued that contextual resources at work and school, along with individual characteristics, are antecedents of the school-work-life interface. Indeed, previous research has found that a variety of work resources, such as interpersonal support and perceived organizational support for school (McNall & Michel, 2017; Wyland et al., 2016), and job benefits, job control, and job-school congruence (Butler, 2007; Creed et al., 2015) were positively related to perceptions of WSE (for a full review, see Choo et al., 2019). However, less research has examined factors related to the family domain and individual characteristics (Choo et al., 2019), with the exception that core self-evaluations and proactive personality were related to WSE (McNall & Michel, 2011). Thus, more work is needed to explore personal factors that predict the work-school interface (Choo et al., 2019).

Nicklin et al. (2018) argued that mindfulness may be an example of a personal resource that can drive work-life enrichment and ultimately lead to enhanced well-being. A small number of recent studies have begun to test this empirically. In a study of 231 employed graduate students, Nicklin et al. (2019) found that trait mindfulness was negatively related to stress via perceptions of enrichment. Allen and Kiburtz (2012) found among a sample of working adults that trait mindfulness was positively associated with work-family balance, sleep quality, and vitality; and that sleep quality and vitality mediated the relationship between mindfulness and work-family balance. Zivnuska et al. (2016) found that mindfulness at work helped employees develop resources in the form of higher work-family balance and job engagement. Most recently, McNall et al. (2019) found that trait mindfulness positively related to work outcomes through positive affectivity and work-life enrichment among a community sample. Taken together, this research provides initial evidence of mindfulness as a personal resource that may promote greater enrichment and balance, but unfortunately, no studies have examined the underlying mechanism by which mindfulness relates to WSE. Below we examine work meaning as one potential mediator.

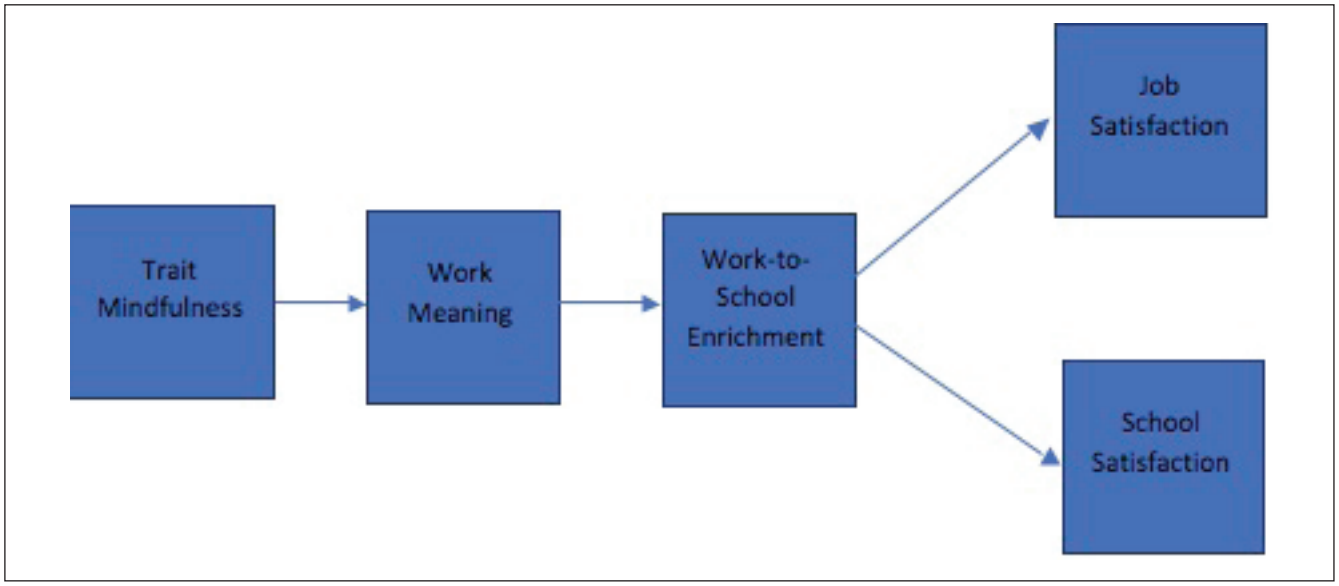
Work Meaning

Meaningful work has been conceptualized in several different ways, but this study adopts Steger et al.,'s (2012) definition of meaningful work, which comprises the following three dimensions: (1) personal meaning in work (i.e., the subjective experience that one's work has personal significance), (2) meaning making through work (i.e., one's meaning in life benefits from meaningful work), and (3) greater good motivations (i.e., the motivation to positively influence the greater good). Meaningful work has been related to a variety of well-being and work-related outcomes, including greater life satisfaction, life meaning, and positive affect, and lower depression and anxiety (Arnold et al., 2007; Steger et al., 2012). Work meaning is also positively associated with intrinsic motivation (Steger et al., 2012), job performance (Harris et al., 2007), career commitment (Duffy et al., 2011), and lower withdrawal intentions and rates of absenteeism (Bunderson & Thompson, 2009; Steger et al., 2012).

As mentioned earlier, MMT may explain how mindfulness might promote meaning. According to this theory, mindfulness allows individuals "to decenter from stress appraisals into a metacognitive state of awareness, resulting in broadened attention to novel information that accommodates a reappraisal of life circumstances" (Garland et al., 2015, p. 377). This reappraisal allows the individual to savor positive features of the environment, ultimately promoting greater meaning. In a recent meta-analysis involving 22 studies, Chu and Mak (2020) found evidence of a moderate sized relationship between mindfulness-based interventions on meaning in life. As such, more mindful individuals may be able to shift perspective and reconstruct greater meaning, which in turn helps them perceive more benefits from their multiple roles. Indeed, Allen and Paddock (2015) argued that mindfulness links to work-family experiences through several pathways that ultimately result in improved self-regulation. For example, mindful individuals experience greater attention, awareness and focus on their roles, manage emotion regulation better, and optimize important resources such as time and energy more effectively, all of which should help in the management of work and non-work roles.

Steger and Ekman (2016) argued for a "natural fusion of meaning and mindfulness" (p. 237), whereby individuals can shape meaning, but only if they are aware of meaning in the first place. As such, mindfulness may be one tool to access meaning, but empirical work is needed to test the relationship between trait mindfulness and work meaning. Taken together, this suggests that mindful individuals may experience greater work meaning, and in turn, should experience greater WSE. Simply put, we predict that mindfulness may be a personal resource (Greenhaus & Powell, 2006; ten Brummelhuis & Bakker, 2012) that promotes WSE via work meaning.

Figure 1: The hypothesized model of work meaning and then WSE as sequential mediators between trait mindfulness and satisfaction



Work-School Enrichment and Outcomes

Three meta-analyses support the link between work-life enrichment and important work, non-work, and health-related outcomes (McNall et al., 2010; Shockley & Singla, 2011; Zhang et al., 2018). In the most comprehensive meta-analysis to date, Zhang et al. (2018) found that work-family enrichment lead to better outcomes in the work domain (i.e., higher job satisfaction, organizational commitment, work engagement, in-role performance, and organizational citizenship behaviors, and lower turnover intentions and burnout), and family domain (i.e., higher family satisfaction and family performance) as well as overall well-being (i.e., higher life satisfaction and better overall health, with lower stress). By extension, Choo et al. (2019) reviewed 20 studies that examined the consequences of work-school conflict and facilitation. They found that inter-role facilitation predicts job satisfaction (McNall & Michel, 2011; McNall & Michel, 2017; Wyland et al., 2016), school satisfaction (McNall & Michel, 2011; Butler, 2007), school performance (Butler, 2007; McNall & Michel, 2011), work performance (Wyland et al., 2016), and general well-being (Creed et al., 2015). Thus, it follows that WSE should be positively related to both job and school satisfaction.

Proposed Model

Taken together, our proposed model (see Figure 1) depicts a model of work meaning and then WSE as sequential mediators between mindfulness and outcomes. As mentioned earlier, this fits with both Garland et al.,'s MMT (2015), and Greenhaus and Powell's (2006) work-family enrichment theory: when individuals have personal resources (e.g., trait mindfulness), reappraisal and savoring facilitates greater work meaning, resulting in higher WSE, and subsequently better outcomes in the form of higher job satisfaction and school satisfaction.

Hypothesis 1: Individuals high in trait mindfulness will experience higher job satisfaction through increased work meaning and WSE.

Hypothesis 2: Individuals high in trait mindfulness will experience higher school satisfaction through increased work meaning and WSE.

METHOD

Participants

Participants included a sample of 399 undergraduate students (102 male, 296 female, and 1 identifying as "Other") attending a mid-sized public university in the northeastern United States. Most participants were between 18-24 years old (95.2%) and white (76.1% White; 11.1% Black; 6.5% Hispanic; 3% Asian; 3.3% Other). Participants worked in a variety of occupations including customer service (33.8%), food preparation/service

European Journal of Applied Positive Psychology 2021, 5, Article 4 ISSN 2397-7116

Table 1: Descriptive Statistics and Correlations Among Main Variables (n =399)

	M	*SD*	1	2	3	4	5
1. Mindfulness	3.54	0.87	(0.88)				
2. Work Meaning	3.28	0.85	0.26***	(0.92)			
3. Work-to-School Enrichment (WSE)	3.61	0.86	0.16***	0.50***	(0.87)		
4. Job Satisfaction	3.76	0.91	0.17***	0.56***	0.50***	(0.88)	
5. School Satisfaction	3.81	0.78	0.14**	0.12*	0.21***	0.22***	(0.87)

*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$

Reliabilities of measures (α) are listed in parentheses.

(26.8%), office/administrative (8.5%), healthcare support services (5.3%), and other (25.6%). Most participants were single (59.8%) or in a relationship but not married (39.3%). Most participants worked between 8-15 hours per week (60.4%) or between 16-20 hours per week (17.3%). Only 13.3% worked more than 25 hours per week.

Procedure

Most participants were recruited from introductory psychology courses via SONA, a web-based recruitment system, over the course of two different academic years. Information about the experiment was posted on SONA and students volunteered in exchange for class credit in an introductory psychology class. During the first year, some participants completed the survey for extra credit in another psychology class. Researchers used Qualtrics, an online survey platform, to screen participants and collect survey data. Participants first read an informed consent page and agreed to its conditions, were screened to ensure that they worked at least eight hours a week, answered basic demographic information, and then answered a battery of survey questions.

To ensure the quality of our analysis, participant data was filtered in two ways. First, we removed data from any participant who answered any of three catch trials (i.e., "*Please indicate answer 3/Neutral*") incorrectly, because incorrect responses suggested respondent inattention and possible data contamination. Second, we also removed data from participants who completed the survey battery in less than five minutes to catch participants who may have been paying enough attention to answer the catch trials correctly, but not enough to consider most questions fully. After applying the above criteria, 399 out of 656 total participants were deemed acceptable for inclusion in analysis.

Measures

Measures were rated on a scale of 1 (*strongly disagree*) to 5 (*strongly agree*) unless noted otherwise. Scale reliabilities are shown in Table 1.

Demographic Variables. Participants' age, sex, race, occupation, year of study, relationship status, overall GPA, and hours worked in an average week were collected.

Trait Mindfulness. The 15-item Mindful Attention Awareness Scale, trait version (MAAS; Brown & Ryan, 2003), was used to measure participants' levels of trait mindfulness. Participants were instructed to use a 6-point scale from 1 (*almost always*) to 6 (*almost never*) to indicate the frequency of their day-to-day experiences. Items were worded so that a high score represented lower trait mindfulness. An example item is "I find it difficult to stay focused on what's happening in the present."

Table 2: Unstandardized Regression Coefficients, Standard Errors and Model Summary Information for the Proposed Serial Mediator Model

	Mediators						Outcomes					
	M_1 Work Meaning			M_2 Work-to-School Enrichment (WSE)			Y_1 Job Satisfaction			Y_2 School Satisfaction		
Antecedent	Coeff	SE	*p*	Coeff	SE	*p*	Coeff	SE	*p*	Coeff	SE	p
X Mindfulness	0.26	0.05	<.001	0.05	0.05	.229	0.01	0.04	.850	0.10	0.05	.034
M_1 Work Meaning				0.50	0.05	<.001	0.46	0.05	<.001	0.01	0.05	.933
M_2 WSE							0.29	0.05	<.001	0.17	0.05	.002
C_1 Age	0.02	0.09	.828	-0.15	0.08	.063	-0.12	0.08	.126	-0.05	0.08	.534
C_2 Gender	0.02	0.09	.827	0.25	0.08	.002	-0.04	0.08	.654	- 0.02	0.09	.796
C_3 Work Hours	0.02	0.03	.450	-0.04	0.03	.129	-0.04	0.03	.184	-0.04	0.03	.170
Constant	2.24	0.27	<.001	1.66	.25	<.001	1.49	.26	<.001	3.06	0.28	<.001
	$R^2 = 0.07$			$R^2 = 0.28$			$R^2 = 0.39$			$R^2 = 0.06$		
	F (4, 389) =7.24, *p* < .001			F (5, 388) = 30.61, *p* <.001			F (6, 386) = 41.14 *p* <.001			F (6, 387) = 4.43 *p* <.001		

The Work and Meaning Inventory: The 10-item Work and Meaning Inventory (WAMI; Steger et al., 2012) was used to determine how much personal meaning participants derived from their job. Participants rated each item on a scale from 1 (*absolutely untrue*) to 5 (*absolutely true*). A sample item is "I view my work as contributing to my personal growth."

Work-to-School Enrichment. A modified version of the three-item Work-to-Family Enrichment (WFE) Scale (Kacmar et al., 2014) was used to assess WSE. A modification to the wording of the items was made from "family member" to "student." A sample item is "My involvement in work makes me feel happy and this helps me be a better student."

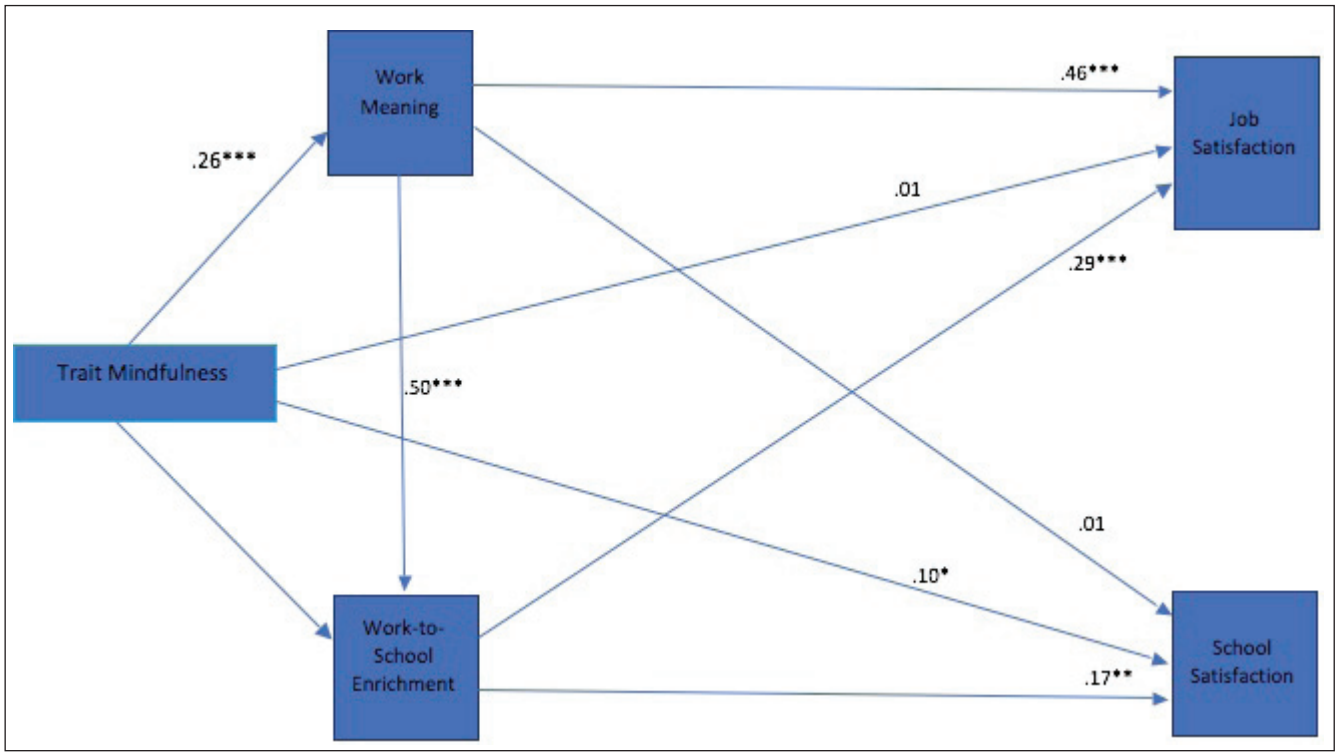
Job Satisfaction. Three items from Spector et al. (2007) were used to measure job satisfaction. As noted by Spector, this scale was originally derived from the three item Cammann et al. (1979) job satisfaction subscale from the Michigan Organizational Assessment Questionnaire. One representative question from the measure is "In general, I like my job."

School satisfaction. We used five items, created by Butler (2007), to measure school satisfaction (e.g., "I enjoy being a student on this campus").

Control Variables. Age, gender, and hours worked were

European Journal of Applied Positive Psychology 2021, 5, Article 4 ISSN 2397-7116

Figure 2: The proposed model of work meaning and then WSE as sequential mediators between trait mindfulness and satisfaction



used as control variables. Hours worked were coded using seven groupings: 8-15, 16-20, 21-25, 26-30, 31-35, 36-40, 40+. Gender was coded with 1 as Male, 2 as Female, and 3 as Other (options were included to allow participants to identify as "Transgender" or "Other"; however, no participants chose Transgender, and only one chose "Other").

RESULTS

Descriptive statistics, coefficient alphas, and correlations were calculated for all study variables, displayed in Table 1. The coefficient alphas indicated that the study variables were internally consistent, and correlation analyses revealed significant relationships in the expected directions among all variables. Specifically, mindfulness correlated significantly, if modestly, to all other study variables. Work meaning and WSE were strongly positively correlated. Work meaning correlated positively with both job and school satisfaction, and WSE positively correlated with job and school satisfaction.

A serial mediation analysis using ordinary least squares path analysis as recommended by Hayes (2013) tested the serial mediation proposed in Figure 1 for both job and school satisfaction, controlling for age, gender, and work hours. Non-standardized coefficients, reported in Table 2 and Figure 2, indicate the observed bivariate relationships between variables. Non-standardized coefficients, unlike Betas, make no assumptions about normality, thereby decreasing Type I error due to the violation of the normality assumption and by increasing power (Hayes, 2013). As reported in Figure 2 and as the model predicts, mindfulness significantly predicted work meaning, which predicted WSE, which in turn is significantly related to both job and school satisfaction in the predicted directions. The control variables' influence on mediators and outcomes was negligible, with only gender being a significant predictor of WSE (B=.25, p<.002), indicating women reported greater WSE.

To determine the significance of the serial mediation, the analyses calculated bias-corrected bootstrap confidence intervals based upon 10,000 bootstrap samples. As hypothesized, the serial mediations from mindfulness to work meaning to WSE

Table 3: 95% Confidence Intervals for the Direct and Indirect Paths for the Proposed Serial Mediation Model

Paths	Indirect Variable			
	Job Satisfaction			
Paths	Effect	SE	Lower Limit	Upper Limit
Direct: Mindfulness	0.008	0.04	-0.078	0.094
Simple: Mindfulness to Meaning	0.118	0.03	**0.068**	**0.181**
Simple: Mindfulness to WSE	0.016	0.02	-0.011	0.047
Serial: Mindfulness to Meaning to WSE	0.037	0.01	**0.019**	**0.063**
	School Satisfaction			
Paths	Effect	SE	Lower Limit	Upper Limit
Direct: Mindfulness	0.099	0.05	**0.007**	**0.191**
Simple: Mindfulness to Meaning	0.001	0.02	-0.027	0.033
Simple: Mindfulness to WSE	0.009	0.01	-0.005	0.031
Serial: Mindfulness to Meaning to WSE	0.021	0.01	**0.008**	**0.042**

Note. Bolded intervals are those which do not include 0, indicating statistical significance, $p < .05$.

to both job and school satisfaction were significant. However, the mediation analyses also calculated the significance of three other paths: (1) a direct path from mindfulness to the outcome; (2) a simple mediated path from mindfulness to work meaning to the outcome; and (3) a second simple mediated path from mindfulness to WSE to the outcome.

As can be seen in Table 3, which reports the effect sizes and 95% confidence intervals for all the paths, mindfulness exerts a significant direct effect on school satisfaction, but not job satisfaction. The simple mediated path from mindfulness to work meaning is significant for job satisfaction, but not school satisfaction. The simple mediated paths from mindfulness to WSE to outcomes is not significant for either school or job satisfaction. Furthermore, a contrast analysis was conducted to evaluate the relative strength of the two significant paths predicting job satisfaction. The simple mediation path from mindfulness to work meaning to job satisfaction was the more robust predictor of job satisfaction 95% CI [0.039, 0.145]. Taken together, these results indicate partial support for Hypothesis 1 and support for Hypothesis 2.

DISCUSSION

The aim of the current study was to explore the relationship between mindfulness and satisfaction through the mediators of work meaning and WSE. Our proposed model suggested that work meaning and then WSE were responsible for the relationship between mindfulness and satisfaction. The results partially supported our proposed model, and several key findings emerged. First, the proposed model with the sequential relationship between work meaning and then WSE fully mediated the relationship between mindfulness and school satisfaction. On the other hand, our contrast analyses revealed that the simple mediated model was better than the serial model for job satisfaction. This suggests that work meaning, and not WSE, plays a critical mediating role in the relationship between mindfulness and job satisfaction. As such, these results help answer not only how mindfulness links to satisfaction, but also which variables are most important, as well as the sequence of the variables. Perhaps WSE is so important for school satisfaction because our measure involved the work-to-school direction. That is, participants were asked to report on how

European Journal of Applied Positive Psychology 2021, 5, Article 4 ISSN 2397-7116

their involvement in work made them a better student, which resulted in positive gains in the school domain, but not the work domain.

Another surprising finding was that none of the paths from mindfulness to WSE to satisfaction were significant. This is likely due to the weak, insignificant relationship between mindfulness and WSE, which runs contrary to some initial evidence indicating that trait mindfulness is positively related to WSE (Nicklin et al., 2018). Once again, this suggests that work meaning seems to be the most important factor that allows students high in trait mindfulness to experience higher job satisfaction.

Theoretical and Practical Implications

From a theoretical perspective, the current study supports the notion of trait mindfulness as a personal resource that helps students derive work meaning. This is likely due to reappraisal of life circumstances and savoring (Garland et al., 2015), in support of the MMT. According to Garland et al., MMT "was developed to explain how individuals flourish and self-generate positive emotional experiences in the face of daily life hassles or serious adversity" (p. 383). Our results provided empirical support that working college students higher in trait mindfulness are likely more aware of work meaning, which helps with higher job satisfaction. In addition, mindfulness not only has a direct impact on school satisfaction, but our study indicates that this is cultivated through work meaning and WSE.

From a practical perspective, our results highlight the importance of mindfulness as a tool for experiencing greater satisfaction via work meaning. Given that "mindfulness at work is thought to be a naturally occurring human capacity that can be learned and developed" (Zivnuska et al., 2016, p. 109) and evidence that mindfulness-based interventions can lead to increases in scores on trait mindfulness measures (Quaglia et al., 2016), universities and organizations may wish to consider offering training to working students on cultivating mindfulness as a means for increasing personal resources. For example, even a one-hour mindfulness-based workshop followed by behavioral self-monitoring for 13 days had an influence on participants' mindfulness and work-family conflict (Kiburz et al., 2017).

However, mindfulness alone does not appear to be sufficient in and of itself in generating higher WSE. Rather, our research indicates that mindfulness needs to foster work meaning. As such, our results underscore the importance of students finding meaningful employment experiences while working on their studies. In particular, career counselors should work with undergraduate students to help them identify their interests and potential career paths that will lead to fulfilling employment while enrolled in college (Choo et al., 2019). According to Busteed and Auter (2017), a recent Gallup poll revealed that graduates who held a relevant job or internship while in school were not only more than twice as likely to gain employment after graduation, but it also reduced the amount of time to find a good job in half, and this applied across majors (Busteed & Auter, 2017). In the same survey, students with meaningful jobs or internships were more likely to find jobs related to their major, and in turn, were more likely to agree that their education was worth the cost. Therefore, time and attention in securing meaningful employment for students benefits individuals both during and after college.

In addition, faculty members, administrators, and organizations can also play an important role by linking students' learning experiences with their work experiences as a way to build greater meaning. For example, faculty members can build job-school congruence (Butler, 2007) by incorporating real-life examples and encouraging students to share real world experiences in the classroom (Choo et al., 2019). Partnerships between colleges and organizations in the form of shadowing, internships, and part-time employment can also help students make the connection between their studies and their work. While students can experience a more realistic preview of the organization, companies also win by being able to "test out" the skills of the student to determine their suitability and fit for full-time positions.

Limitations and Future Research

As with any study, there are limitations in the present study that must be acknowledged. First, the majority of participants were college students working 20 hours per week or less. The extent to which these results apply to other types of participants (e.g., non-traditional college students working full-time) must be examined in future research. These types of students could also have competing demands from other life domains (e.g., family, leisure), and it would be interesting to see if the results hold. Future research is needed to determine the generalizability of our findings, but this is the case for all research (Dipboye, 1990).

Second, the data presented here is based on self-report, which may inflate common method bias. The data were correlational in

nature and based on a single source, so conclusions about causality cannot be made. In addition, we measured participant perceptions at one point in time. In the future, perceptions of WSE could be captured over time and ideally from more than one source (e.g., roommate, supervisor, partner). Furthermore, given the central role of work meaning, future research should explore other variables beyond mindfulness that contribute to work meaning. In fact, MMT recognizes that mindfulness is not the only path to meaningfulness (Garland et al., 2015). Other variables, such as intrinsic motivation and task significance may be important at driving meaningful work, which could have implications for WSE. In addition, other personal resources such as optimism (ten Brummelhuis & Bakker, 2012), resilience and self-compassion (Nicklin et al., 2018) could help working students experience greater WSE. Following the lead of Calderwood and Gabriel (2017), more work should examine the transmission of both demands and resources in the direction of school-to-work, and it would be interesting to see if these results have implications for work outcomes. Other outcomes variables should also be studied, including health behaviors (Choo et al., 2019).

CONCLUSION

College students are more likely to be employed than ever before, and this trend is likely to continue. As such, positive organizational scholars and practitioners need to determine ways to foster greater well-being among working college students. The current study focused on mindfulness, which can be a stable trait, but also modifiable through practice (Brown & Ryan, 2003). Regardless of the approach, our results found that mindful individuals can experience higher satisfaction through work meaning and perhaps through WSE, though this could depend on the domain of the outcome variable of interest. These results could be used to provide recommendations that enhance the well-being of employed college students, such as mindfulness-based training that promotes the reappraisal of work meaning. Moreover, these preliminary results, if supported in actual interventions, underscore the importance of meaningful work for employed college students. ■

Citation

McNall, L. A., Bennett, M., & Brown, M. M. (2021).'Does trait mindfulness help working college students get more satisfaction? The mediating role of work meaning and work-to-school enrichment.' *European Journal of Applied Positive Psychology*, 5, 4, 1-13. http://www.nationalwellbeingservice.org/volumes/volume-5-2021/volume-5-article-4/

Biographies

Laurel A. McNall, PhD is Associate Professor of Psychology at SUNY Brockport and her research focuses on work-life enrichment, worker well-being, and electronic monitoring. She earned her bachelor's degree in Psychology from Canisius College and a PhD in Industrial/Organizational Psychology from University at Albany, SUNY.

https://orcid.org/0000-0002-9101-9123

Matthew Bennett is a graduate student pursuing a Master of Arts in Industrial-Organizational Psychology at SUNY Albany. His past research has focused on the interface between sound and cognitive restoration. He earned a bachelor's degree in Psychology from SUNY Brockport.

https://orcid.org/0000-0001-9932-4918

Melissa M Brown, PhD is an Assistant Professor of Psychology at SUNY Brockport. Her current research focuses on dispositional mindfulness and cognitive processes: attention, memory, and time perception. She earned her BS degree in Psychology from the University of Illinois-Champaign\Urbana, followed by a Ph.D. in Clinical Psychology from Indiana University-Bloomington.

https://orcid.org/0000-0002-8715-5974

European Journal of Applied Positive Psychology 2021, 5, Article 4 ISSN 2397-7116

References

Allen, T. D., & Kiburz, K. M. (2012). Trait mindfulness and work–family balance among working parents: The mediating effects of vitality and sleep quality. *Journal of Vocational Behavior*, *80*, 372-379. https://doi.org/10.1016/j.jvb.2011.09.002

Allen, T. D., & Paddock, E. L. (2015). How being mindful impacts individuals' work-family balance, conflict, and enrichment: a review of existing evidence, mechanisms and future directions. In J. Reb & P.W.B. Atkins (Eds.), *Mindfulness in organizations: Foundations, research, and applications* (pp. 213-238). Cambridge University Press. https://doi.org/10.1017/CBO9781107587793.011

American College Health Association (2015). *ACHA-National College Health Assessment II* [Executive Summary]. https://www.acha.org/documents/ncha/NCHA-II%20FALL%202015%20REFERENCE%20GROUP%20EXECUTIVE%20SUMMARY.pdf

Arnold, K. A., Turner, N., Barling, J., Kelloway, E. K., & McKee, M. C. (2007). Transformational leadership and psychological well-being: The mediating role of meaningful work. *Journal of Occupational Health Psychology*, *12*(3), 193-203. https://doi.org/10.1037/1076-8998.12.3.193

Barling, J., Rogers, K.-A., & Kelloway, E. K. (1995). Some effects of teenagers' part-time employment: The quantity and quality of work make the difference. *Journal of Organizational Behavior*, *16*(2), 143-154. https://doi.org/10.1002/job.4030160205

Broadbridge, A., & Swanson, V. (2005). Earning and learning: How term-time employment impacts on students' adjustment to university life. *Journal of Education and Work*, *18*(2), 235-249. https://doi.org/10.1080/13639080500086008

Brown, K. W., & Ryan, R. M. (2003). The benefits of being present: Mindfulness and its role in psychological well-being. *Journal of Personality and Social Psychology, 84,* 822-848. https://doi.org/10.1037/0022-3514.84.4.822.

Bunderson, J. S., & Thompson, J. A. (2009). The call of the wild: Zookeepers, callings, and the double-edged sword of deeply meaningful work. *Administrative Science Quarterly*, *54*(1), 32-57. https://doi.org/10.2189/asqu.2009.54.1.32

Busteed, B., & Auter, Z. (2017). Why colleges should make internships a requirement. *Gallup Blog*. https://news.gallup.com/opinion/gallup/222497/why-colleges-internships-requirement.aspx

Butler, A. B. (2007). Job characteristics and college performance and attitudes: A model of work-school conflict and facilitation. *Journal of Applied Psychology*, *92*(2), 500-510. https://doi.org/10.1037/0021-9010.92.2.500

Butler, A. B., & Matthews, R. (2009, April). *A daily study of work-school conflict and enrichment.* Poster presented at the Society for Industrial Organizational Psychology Conference, New Orleans, LA.

Calderwood, C., & Gabriel, A. S. (2017). Thriving at school and succeeding at work? A demands-resources view of spillover processes in working students. *Journal of Vocational Behavior*, *103*, 1-13. https://doi.org/10.1016/j.jvb.2017.07.010

Cammann C., Fichman M., Jenkins D., & Klesh J. (1979). *The Michigan organizational assessment questionnaire*. Unpublished manuscript, University of Michigan, Ann Arbor.

Cheng, B. H., & McCarthy, J. M. (2013). Managing work, family, and school roles: Disengagement strategies can help and hinder. *Journal of Occupational Health Psychology*, *18*(3), 241-251. https://doi.org/10.1037/a0032507

Choo, C. E. K., Kan, Z. X., & Cho, E. (2019). A review of the literature on the school-work-life interface. *Journal of Career Development*, 0894845319841170. https://doi.org/10.1177/0894845319841170

Christie, A. M., Atkins, P. W., & Donald, J. N. (2017). The meaning and doing of mindfulness: The role of values in the link between mindfulness and well-being. *Mindfulness, 8,* 368-378. https://doi.org/10.1007/s12671-016-0606-9

Chu, S.T.W. & Mak, W.W.S. (2020). How mindfulness enhances meaning in life: A meta-analysis of correlational studies and randomized controlled trials. *Mindfulness, 11*, 177-193. https://doi.org/10.1007/s12671-019-01258-9

Creed, P. A., French, J., & Hood, M. (2015). Working while studying at university: The relationship between work benefits and demands and engagement and well-being. *Journal of Vocational Behavior*, *86*, 48-57. https://doi.org/10.1016/j.jvb.2014.11.002

Crist, C. (2018, November 1). *Mental health diagnoses rising among U.S. college students.* Reuters. https://www.reuters.com/article/us-health-mental-college-idUSKCN1N65U8

Dipboye, R. L. (1990). Laboratory vs. field research in industrial and organizational psychology. *International Review of Industrial and Organizational Psychology*, *5*, 1-34.

Duffy, R. D., Dik, B. J., & Steger, M. F. (2011). Calling and work-related outcomes: Career commitment as a mediator. *Journal of Vocational Behavior*, *78*(2), 210-218. https://doi.org/10.1016/j.jvb.2010.09.013

Fortney, L., Luchterhand, C., Zakletskaia, L., Zgierska, A., & Rakel, D. (2013). Abbreviated mindfulness intervention for job satisfaction,

quality of life, and compassion in primary care clinicians: A pilot study. *The Annals of Family Medicine, 11,* 412-420. https://doi.org/10.1370/afm.1511.

Garland, E. L., Farb, N. A., Goldin, P. R., & Fredrickson, B. L. (2015). The mindfulness-to-meaning theory: Extensions, applications, and challenges at the attention–appraisal–emotion interface. *Psychological Inquiry*, *26*(4), 377-387. https://doi.org/10.1080/1047840X.2015.1092493

Greenhaus, J. H., & Beutell, N. J. (1985). Sources of conflict between work and family roles. *Academy of Management Review*, *10*, 76-88. https://doi.org/10.5465/amr.1985.4277352

Greenhaus, J. H., & Powell, G. N. (2006). When work and family are allies: A theory of work family enrichment. *Academy of Management Review, 31*, 72-92. https://doi.org/10.2307/20159186

Harris, K. J., Kacmar, K. M., & Zivnuska, S. (2007). An investigation of abusive supervision as a predictor of performance and the meaning of work as a moderator of the relationship. *The Leadership Quarterly*, *18*(3), 252-263. https://doi.org/10.1016/j.leaqua.2007.03.007

Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. Guilford Press.

James, S. D. (2017, May 16). *Why "weightlifting for the brain" may be an antidote to student stress.* NBC News. https://www.nbcnews.com/feature/college-game-plan/mindfulness-meditation-may-help-students-combat-high-levels-stress-depression-n759971

Kacmar, K, Crawford, W., Carlson, D., Thompson, M., & Whitten, G. (2014). A short and valid measure of work-family enrichment. *Journal of Occupational Health Psychology*. 19. 32-45. https://doi.org/10.1037/a0035123

Kiburz, K. M., Allen, T. D., & French, K. A. (2017). Work–family conflict and mindfulness: Investigating the effectiveness of a brief training intervention. *Journal of Organizational Behavior, 38*(7), 1016-1037. https://doi.org/10.1002/job.2181

McNall, L. A., & Michel, J. S. (2011). A dispositional approach to work–school conflict and enrichment. *Journal of Business and Psychology*, *26*, 397-411. https://doi.org/10.1007/s10869-010-9187-0

McNall, L. A., & Michel, J. S. (2017). The relationship between student core self-evaluations, support for school, and the work–school interface. *Community, Work & Family*, *20*(3), 253-272. https://doi.org/10.1080/13668803.2016.1249827

McNall, L. A., Nicklin, J. M., & Masuda, A. D. (2010). A meta-analytic review of the consequences associated with work–family enrichment. *Journal of Business and Psychology*, *25*, 381-396. https://doi.org/10.1007/S10869-009-9141-1

McNall, L. A., Tombari, J. M., & Brown, M. M. (2019). Exploring how mindfulness links to work outcomes: Positive affectivity and work-life enrichment. *Applied Research in Quality of Life*. https://doi.org/10.1007/s11482-019-09762-9

Michel, A., Bosch, C., & Rexroth, M. (2014). Mindfulness as a cognitive–emotional segmentation strategy: An intervention promoting work–life balance. *Journal of Occupational and Organizational Psychology, 87,* 733-754. https://doi.org/10.1111/joop.12072

Morganson, V. J., Rotch, M. A., & Christie, A. R. (2015). Being mindful of work–family issues:intervention to a modern stressor. *Industrial and Organizational Psychology: Perspectives on Science & Practice*, *8*, 682-689.

Nicklin, J.M., McNall, L.A., & Janssen, A. (2018). An examination of positive psychological resources for promoting work-life balance. In J.M. Nicklin (Ed.), *Work-life balance in the 21st Century: Perspectives, practices and challenges*. Nova Publishers.

Nicklin, J.M., Meachon, E., & McNall, L.A. (2019). Balancing work, school, and personal life among graduate students: A positive psychology approach. *Applied Research in Quality of Life, 14,* 1265-1286. https://doi.org/10.1007/s11482-018-9650-z

Quaglia, J. T., Braun, S. E., Freeman, S. P., McDaniel, M. A., & Brown, K. W. (2016). Meta-analytic evidence for effects of mindfulness training on dimensions of self-reported dispositional mindfulness. *Psychological Assessment, 28*(7), 803-818. https://doi.org/10.1037/pas0000268.supp

Roeser, R. W., Schonert-Reichl, K. A., Jha, A., Cullen, M., Wallace, L., Wilensky, R., Oberle, E., Thomson, K., Taylor, C., & Harrison, J. (2013). Mindfulness training and reductions in teacher stress and burnout: Results from two randomized, waitlist-control field trials. *Journal of Educational Psychology, 105,* 787-804. https://doi.org/10.1037/a0032093.

Shockley, K. M., & Singla, N. (2011). Reconsidering work–family interactions and satisfaction: A meta-analysis. *Journal of Management*, *37*, 861-886. https://doi.org/10.1177/0149206310394864

Spector, P.E., et al. (2007). Cross-national differences in relationships of work demands, job satisfaction, and turnover intentions with work-family conflict. *Personnel Psychology, 60,* 805-835. https://doi.org/10.1111/j.1744-6570.2007.00092.x

St. Amour, M. (2019, November 18). *Most college students work, and that's both good and bad.* Inside Higher Ed. https://www.insidehighered.com/news/2019/11/18/most-college-students-work-and-thats-both-good-and-bad

Steger, M. F., Dik, B. J., & Duffy, R. D. (2012). Measuring meaningful work: The work and meaning inventory (WAMI). *Journal of Career*

European Journal of Applied Positive Psychology 2021, 5, Article 4 ISSN 2397-7116

Assessment, *20*(3), 322–337. https://doi.org/10.1177/1069072711436160

Steger, M.F., & Ekman, E. (2016). Working it: Making meaning with workplace mindfulness. In I. Itzvan (Ed.), *Mindfulness in positive psychology: The science of meditation and wellbeing* (pp. 228-242). Routledge/Taylor & Francis Group.

Swanson, V., Broadbridge, A., & Karatzias, A. (2006). Earning and learning: Role congruence, state/trait factors and adjustment to university life. *British Journal of Educational Psychology*, *76*(4), 895-914. https://doi.org/10.1348/000709905X65009

ten Brummelhuis, L. L., & Bakker, A. B. (2012). A resource perspective on the work–home interface: The work–home resources model. *American Psychologist, 67*, 545-556. https://doi.org/10.1037/a0027974

Wyland, R., Lester, S. W., Ehrhardt, K., & Standifer, R. (2016). An examination of the relationship between the work–school interface, job satisfaction, and job performance. *Journal of Business and Psychology*, *31*(2), 187-203. https://doi.org/10.1007/s10869-015-9415-8

Zhang, Y., Xu, S., Jin, J., & Ford, M. T. (2018). The within and cross domain effects of work family enrichment: A meta-analysis. *Journal of Vocational Behavior, 104*, 210-227. https://doi.org/10.1016/j.jvb.2017.11.003

Zivnuska, S., Kacmar, K. M., Ferguson, M., & Carlson, D. S. (2016). Mindfulness at work: Resource accumulation, well-being, and attitudes. *Career Development International, 21*, 106-124. https://doi.org/10.1108/CDI-06-2015-0086