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MINDFULNESS MATTERS: The Effects of Mindfulness on Organizational Citizenship Behavior

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CLAREMONT McKENNA COLLEGE

MINDFULNESS MATTERS:

The Effects of Mindfulness on Organizational Citizenship Behavior

SUBMITTED TO

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BY

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FOR

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This yearlong empirical thesis research project was conducted in part to fulfill the Psychology Department's Honors Thesis requirement. The author would like to express sincere gratitude to Dr. Riggio as a professor, research advisor, thesis reader, mentor, and constant source of inspiration to continue to use psychology in order to transcend the limits of our current understanding of the world. Special thanks should be given to Christopher, Dr. Levin, and Dr. Reina for encouraging more advanced theory development, as well as methodological and statistical guidance. Additionally, the author has always appreciated M&D, A&N, D&S, and other loved ones who act as epitomes of present-moment engagement, authenticity and altruism in all that they do on a daily basis.

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Abstract

Both mindfulness and authentic leadership base themselves on self-awareness. Authentic leadership has positively predicted organizational citizenship behavior (OCB), and mindfulness has been positively correlated to work engagement, which has shared positive relationships with OCB. Job demands (JD) have been shown to compromise work engagement. Using a sample of 134 MBA and undergraduate students, a longitudinal design evaluated the meditational role of authentic functioning (AF) between mindfulness and OCB and the moderating role of JD. Over the course of three months, three questionnaires were administered to measure mindfulness, AF, OCB, and JD. Despite the positive predictive relationship between mindfulness and AF, there was not a significant predictive relationship between AF and OCB or the predictor (i.e. mindfulness) and criterion (i.e. OCB) variables, so structural equation modeling could not reveal if AF mediates the relationship between mindfulness and OCB. These findings suggest that AF could be a characteristic mechanism of mindfulness that helps facilitate certain behaviors. Future practical implications could suggest the prosocial value of cultivating mindfulness and authentic leadership to promote overall organizational functioning.

Keywords: Mindfulness, Authentic Leadership, Organizational Citizenship Behavior, Job Demands

MINDFULNESS MATTERS:

The Effects of Mindfulness on Organizational Citizenship Behavior

This study explores the relationship between present moment awareness (i.e. mindfulness), and voluntary prosocial behavior (i.e. organizational citizenship behavior). This research also delves deeper in order to address the underlying processes by which mindfulness functions. For instance, the congruence between personal values and behavior (i.e. authentic leadership via authentic functioning) may play a role in helping mindfulness to promote altruistic behavior. This study integrates the two relatively new scientific fields of mindfulness and authentic leadership in order to take the initial steps in building a case for their importance in cultivating not only prosocial altruistic behavior at the individual-level, but also corporate social responsibility at the organizational-level.

Mindfulness. Mindfulness has become increasingly popular, especially in the organizational setting (Glomb, Duffy, Bono & Yang, 2011). Mindfulness has been conceptualized as “nonjudgmental, present-moment awareness” (Kabat-Zinn, 1994). Although it roots itself in the core of Buddhist philosophy, mindfulness remains outside the realm of religion (Hagen, 2009). It has been considered to imply a type of “self-regulated awareness” that is theoretically comparable to “situational self-awareness,” awareness of internal and external conditions (Lau et al., 2006; Buss, 1980).

Mindfulness & Altruism. Mindfulness has been associated with increased levels of empathy, which the empathy-altruism hypothesis posits leads to altruistic motivations. According to the Empathy-Altruism Hypothesis, empathy is able to create pro-social emotion, which can result in altruistic motivation (Batson et al., 1991). In a study on

mindfulness-based stress reduction (MBSR), Birnie, Speca, and Carlson (2010) reported results that demonstrated there was an increase in empathic perspective taking after the MBSR intervention. Kinsler (2014) proposed an Evidence-Based Leadership Coaching and Mindfulness program to instill higher levels of self-awareness and self-regulation, which could have implications for both levels of authentic leadership and mindfulness. Additionally, meditation has been used as a tactic to promote mindfulness ($r = .50, p = .03$) and altruistic orientation ($r = .46, p = .04$) within individuals (Wallmark, Safarzadeh, Daukantaitė, & Maddux, 2013). This demonstrates meditation's moderate correlations between both mindfulness and altruism (Evans, Heath, & Lalljee, 1996).

Mindfulness & Organizational Citizenship Behavior. Organizational citizenship behavior (OCB), also conceptualized as contextual performance, is discretionary prosocial behavior (Organ, 1988; Borman & Motowidlo, 1993). Prosocial behavior includes non-egotistic interests and other-concerned inclinations (Fehr & Gächter, 2000a). Williams and Anderson (1991) theorized OCB includes two dimensions: OCBI, directed toward individuals, and OCBO, directed toward the organization. Organ (1988) captures the altruistic component of OCB with the conceptualization of OCB into five dimensions: altruism, courtesy, sportsmanship, conscientiousness, and civic virtue.

Mindfulness has predicted altruistic helping behavior in applied settings in the real world. Cameron and Fredrickson (2015) found that two dimensions, present-moment awareness and nonjudgmental acceptance, not only predicted helping behavior, as operationalized by OCB, but also predicted increases in positive emotions and decreases in negative emotions associated with those helping behaviors. Moreover, mindfulness has

been shown to positively correlate with positive organizational outcomes, such as work engagement (Leroy, Anseel, Dimitrova, & Sels, 2013). Work engagement has been significantly and positively correlated with OCB, and it has mediated the relationship between charismatic leadership and OCB (Babcock-Roberson & Strickland, 2010).

Authentic Leadership. Like mindfulness, authentic leadership (AL) bases itself on self-awareness (Lau et al., 2006; Gardner, Avolio, Luthans, May, & Walumbwa, 2005). Baron (2016) found that mindfulness was positively correlated to AL in his study evaluating the effects of an authentic leadership development program on associated levels of AL and mindfulness. Authentic Leadership Theory explains that a leader high in “commitment-to-self” and self-awareness will act consistently to his or her own personal values (i.e. “true self”) (Gardner, et al., 2005). Harter (2002) defines authenticity as “owning one's personal experiences, be they thoughts, emotions, needs, wants, preferences, or beliefs, processes captured by the injunction to know ‘oneself.’” One of the four components of authenticity is awareness (Kernis, 2003). Kernis’ (2003) authenticity model also includes unbiased processing, relational authenticity, and authentic behavior/action. Avolio and Gardner (2005) re-conceptualized this model to encompass positive moral perspective, self-awareness, and self-regulations (balanced processing, relational transparency and internalized).

Gardner et al. (2005) posits that authentic leadership also includes authentic relationships, which encompass: “a) transparency, openness, and trust, b) guidance toward worthy objectives, and c) an emphasis on follower development.” However, it is important to note that these “worthy objectives” that supposedly guide authentic leaders

are not only culturally constructed, but also person-specific. Not all people, or authentic leaders, may include empathy or altruism as values of their self-concept to which they will remain true. Mindfulness could prove to be an invaluable means of developing authentic leaders and cultivating the “worthy objective” of altruism.

Authentic Leadership & Organizational Citizenship Behavior. It is important to note that while ethical leadership emphasizes moral management and awareness of others, AL emphasizes authenticity and self-awareness (Brown & Treviño, 2006). However, ethical and authentic leadership are very similar constructs, and Riggio, Zhu, Reina, & Maroosis (2010) found them to share a strong positive correlation ($r = 0.94$). Both styles of leadership theoretically have the characteristic selfless concern for others of altruism. Batson (1998) defined altruism as, “the motivation to increase another person’s welfare.” Other variables that could affect ethical leadership, with much overlap in authentic leadership, include agreeableness, need for power, moral judgment, and self-monitoring (Brown & Treviño, 2006). AL has been found to relate to follower organizational commitment, as mediated by perceptions of leader behavioral integrity (Leroy, Palanski, & Simons, 2012). Tonkin (2013) found AL predicted employee altruism, as operationalized by organizational citizenship behavior.

The majority of AL authors research this style of leadership from an American perspective (Gardner et al., 2011). However, Bhindi and Duignan (1997) included a multicultural component in their definition of AL. That is, AL encompasses the ability to sense the needs of others, especially in “multicultural settings in which many leaders operate in the light of the increasing globalizing trends in life and work” (Bhindi &

Duignan, 1997). As of 2010, only one researcher of 203 (0.49%) studied AL in Spanish academic literature. However, post-2010, Spanish academics began to enter the field with contemporary AL publications, which is a step toward addressing the American overrepresentation in the AL literature (Gardner, Cogliser, Davis, & Dickens, 2011). Azanza, Moriano, and Molero (2013) collected data with findings that AL mediated the positive relationship between flexibility-oriented organizational cultures and worker satisfaction. Moreover, Edú Valsania, Moriano León, Molero, & Topa (2012) found that AL positively predicted employee OCB, especially when directed toward the organization.

Authentic Functioning & Organizational Citizenship Behavior. Authentic leadership is conceptually related to authentic functioning (AF), in that AF refers to one's ability to use self-awareness and knowledge of personal values to act and behave (Avolio & Gardner, 2005). Leroy, et al. (2013) found mindfulness to positively correlate with authentic functioning. That is, AL is the manifested praxis of AF (Leroy et al., 2012).

Furthermore, authentic functioning has been found to mediate the relationship between mindfulness and rate of increase in work engagement (Leroy et al., 2013). Additionally, Alfes, Shantz, Truss, and Soane (2013) found that employee engagement shared a significant relationship with organizational citizenship behavior, in that it explained the effect of perceived human resource management practices on OCB. Thus, with these previous significant relationships between mindfulness, authentic leadership/functioning, and OCB, with an overarching framework of work engagement,

this study seeks to further investigate authentic functioning's potential mediating role between mindfulness and organizational citizenship behavior.

Job Demands-Resources (JD-R) Model. In addition to mindfulness and authentic functioning's positive correlations with work engagement, job demands and job resources also share a relationship with work engagement. According to the Job Demands-Resources (JD-R) Model, there are two types of job characteristics that affect employee well-being: job demands and job resources (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001; Bakker, Demerouti, & Verbeke, 2004; Bakker & Demerouti, 2007). Job demands include "physical, psychological, social, or organizational aspects of the job that require sustained physical and/or psychological (cognitive and emotional) effort or skills and are therefore associated with certain physiological and/or psychological costs" (Bakker & Demerouti, 2007). There are five types of job demands, such as physical workload, time pressure, recipient contact, physical environment, and shift work (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). On the other hand, there are six types of job resources, which include feedback, rewards, job control, participation, job security, and supervisor support (Demerouti et al., 2001). According to Bakker and Demerouti (2007), job resources include physical, psychological, social, or organizational aspects of the job that are either/or: "Functional in achieving work goals, reduce job demands and the associated physiological and psychological costs, stimulate personal growth, learning, and development" (pp. 312).

Job Demands-Resources (JD-R) Model & Organizational Citizenship Behavior. Choi (2013) found that job resources were positively correlated to work engagement.

Bakker, Hakanen, Demerouti, and Xanthopoulou (2007) found similar results, in that job resources were significantly related to engagement, especially when under high job demand circumstances. Work engagement has been shown to share a positive relationship with organizational citizenship behavior, as moderated by job demands (Choi, 2013). In contrast, social interaction has moderated the effect of job stressors on organizational citizenship behavior (Pooja Clercq, & Belausteguigoitia, 2016). The presence or absence of stressors, such as job demands (e.g. workload, time pressure, or interpersonal conflict), could affect the relationship between mindfulness and organizational citizenship behaviors. However, job resources have buffered the negative effect of job demands on burnout (Bakker, Demerouti, Taris, Schaufeli, & Schreurs, 2003; Bakker, Demerouti, & Euwema, 2005). The Karasek and Theorell (1990) Job Demand-Control-Support model attributes the least ideal job strain as a reaction to “high job demands, low control and low worksite support” (Pelfrene et al., 2001). Mindfulness and authentic functioning, as a form of “job resource,” could similarly buffer any detrimental effects of job demands on organizational citizenship behavior.

This study seeks to evaluate authentic functioning individuals (i.e. those whose values are aligned with behavior), be they leaders, followers, or any part of the leadership process, and their ability to take a step back to view the current, perhaps difficult and taxing, situation. Despite the presence of stressors, these mindful and authentic functioning people may use a unique non-reactive pause in order to take into account their own self-awareness, realize the way in which their self affects others, and return to practicing their personal value of prosocial behavior with others as a “worthy objective.” This study does not assume that all authentic leaders, followers, and individuals with

authentic functioning are prosocial or altruistic. Rather, it hopes to address the possible means to facilitate prosocial and altruistic values and action within and between authentic leaders, followers, and individuals.

The purpose of this study is to examine mindfulness' effects on organizational citizenship behavior (OCB) mediated through authentic functioning. It also seeks to address whether or not these posited relationships remain stronger in their predictive power under conditions of lower job demands (JD). That is, we expect that mindful self-aware workers who are more authentic will be more present and engaged in their jobs, as demonstrated by OCB.

The main research questions ask: 1) Does authentic functioning mediate the relationship between mindfulness and organizational citizenship behavior? 2) Do job demands moderate the effect of mindfulness on organizational citizenship behavior, as mediated by authentic functioning?

The hypotheses (Figure 1) posit that job stress interacts with mindfulness to affect organizational citizenship behavior through authentic functioning such that: When job stress is low, mindfulness strongly positively predicts organizational citizenship behavior through authentic functioning (Hypothesis 1), and when job stress is high, mindfulness less strongly positively predicts organizational citizenship behavior through authentic functioning (Hypothesis 2).

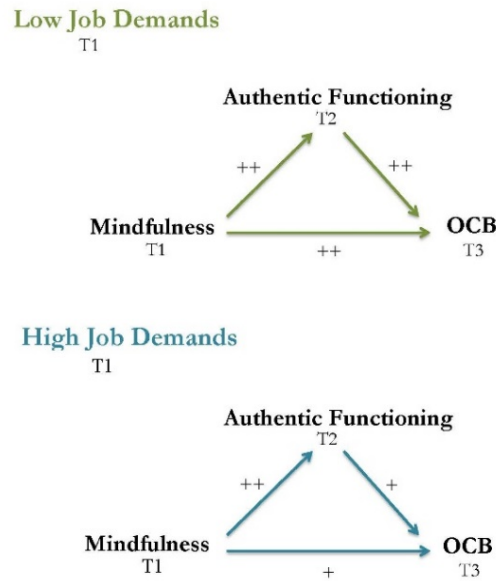


Figure 1. Hypothesized Moderated Mediation Model

Note: All effects control for measurement of the dependent variable (i.e. authentic functioning and OCB) at Time 1.

Method

Participants. A total of 134 participants ($n_{\text{Female}} = 91$, $n_{\text{Male}} = 43$, $M_{\text{Age}} = 21.64$, $SD_{\text{Age}} = 5.91$; $\text{Age}_{\text{Range}} = 18$ to 50) were recruited from a consortium of undergraduate liberal arts colleges ($n = 115$; 85.82%) and a Master of Business Administration (MBA) ($n = 19$; 14.18%) program. Forms of compensation varied from research participation credit, class extra-credit, and no compensation. Most participants were Caucasian ($n = 83$; 61.9%) or Asian ($n = 31$; 23.1%). However, various races were also represented, such as African American ($n = 9$; 6.7%), as well as American Indian or Alaskan Native ($n = 1$; 0.7%). The GPA ranged from 2.5 to 4.0 on a 4.0 scale ($M_{\text{GPA}} = 3.57$, $SD_{\text{GPA}} = 0.29$). Due to the longitudinal design of the study, there existed attrition, in which 11 participants from Time 1 (T1) did not complete the study in Time 2 (T2) for an 8.2% rate of attrition. From the participants that participated in T1 and T2, 50 did not complete Time 3 (T3) for a 37.31% rate of attrition ($n_{\text{T1-T3}} = 84$).

Design. This study used a between-subjects longitudinal design. The participants were recruited through convenience sampling. Mindfulness was the predictor variable, authentic functioning was the mediator variable, and organizational citizenship behavior (OCB) was the criterion variable, while job demands (JD) was the moderator variable. All constructs were measured (2-4 weeks apart) at all three data collection time points: January 27-February 15, February 19-March 6 and March 20-31.

Procedure. The study included a confidential online survey, using Qualtrics as the survey tool. The survey began with an informed consent form (Appendix A(a) and Appendix A(b)). The consent form used a cover story of research studying well-being in the workplace. Afterwards, at T1, T2, and T3, the participants answered the general survey questions, which included 4 scales that measured levels of mindfulness, authentic functioning, OCB, and job demand (Appendix B-E): Brown and Ryan's (2003) 15-item Mindful Attention Awareness Scale (MAAS), an adapted version of Martinez, Sawyer, Thoroughgood, Ruggs, and Smith's (2017) 7-item Authentic Functioning scale, Fox, Spector, Goh, Bruursema, Kessler's (2012) 20-item Organizational Citizenship Behavior Checklist (OCB-C), and Moen, Kelly, and Lam's (2013) 6-item Psychological Job Demands Scale. All four measures totaled to 48-items. The students were asked to conceptualize their experiences at school, which could be considered their primary workplace, in addition to past and current jobs while answering this questionnaire. It is important to note that another scale was included to measure psychological job resources: Ford and Wooldridge's (2012) Supervisor Support Measures 9-item scale (Appendix F). This was only collected for potential explanatory analyses purposes to possibly evaluate if job resources buffered any negatives of job demands.

At each of the three time points, the order of the 5 scales was randomized between participants in order to prevent, or minimize, any carryover or sequence effects. All of the individual items within the 5 scales (i.e. MAAS, authenticity, OCB-C, Psychological Job Demand, and Supervisor Support) were randomized to also address the potential threat of order effects.

The participants then answered 8 demographic questions (i.e. Intro 1-Intro 8b) (Appendix G). GPA was included as a demographic question since some undergraduate students earned extra credit for their participation in the study, while other undergraduate students were compensated with research credit hours. MBA students were not offered any form of compensation. The final page of the survey at T1 and T2 included acknowledgement forms (Appendix H-I), while T3 included the final debriefing form, which explained the true focus of the study (Appendix J). Because there were multiple surveys administered over the course of three months, participants were also emailed reminders for upcoming data waves. An example email is provided in Appendix K.

Measures.

Mindfulness Attention Awareness Scale (MAAS). Brown and Ryan's (2003) 15-item Mindful Attention Awareness Scale (MAAS) measured dispositional, or trait, mindfulness with 15 items. Trait mindfulness was used in this non-intervention mindfulness study since the research question did not focus on induced state mindfulness. Rather, mindfulness was conceptualized as a more stable dispositional characteristic. The MAAS included a 6-point Likert scale that the participants used to rate their level of agreement with the item statements, ranging from *Almost Always* (1), *Somewhat Infrequently* (4), and *Almost Never* (6). For instance, an item stated that, "I could be

experiencing some emotion and not be conscious of it until some time later.” The 15 scale items in the MAAS were averaged to create one mindfulness score. Each of the 15 MAAS items had a score range of 1 to 6. With a possible total score of 90, higher scores indicated higher levels of dispositional mindfulness.

MAAS Missing Data. Subject 91 did not complete 4 of the 15 items on the MAAS in Time 2. The subject’s scale average was 2.64 with the 4 missing items. Based on the initial scale average of 2.64, the value of 3 was used for all 4 of the non-completed items. The resulting MAAS average was 2.73 for subject 91.

Authenticity Scale. An adapted version of Martinez, Sawyer, Thoroughgood, Ruggs, and Smith’s (2017) 7-item authenticity scale measured authentic functioning. These items represented two subscales: action authenticity, one’s alignment between “felt and expressed identity,” and relational authenticity, consistency between perceptions of one’s self and others’ perceptions of one’s self. The authenticity scale used a 7-point Likert scales that participants used to identify their degree of agreement with the item statements. Responses ranged from *Never* (1) and *All the Time* (7) for the action authenticity subscale and from *Strongly Disagree* (1) and *Strongly Agree* (7) for the relational authenticity subscale. A sample item from the action authenticity subscale included, “At work, how often do you feel like your inner identity does not match your outward appearance and actions?” A relational authenticity subscale item stated, “My coworkers’ perceptions of my identity match my own perception of my identity.” The 7 items from the two subscales were averaged to make an authentic functioning score. Each of the 7 authenticity scale items ranged from 1 to 7, creating a possible score of 49. All

three of the action authenticity subscale items were negatively worded, and thus, reverse coded. One relational authenticity item (A_R4) was also reverse coded. Higher scores denoted higher levels of authentic functioning.

Organizational Citizenship Behavior Checklist (OCB-C). Fox et al.'s (2012) 20-item Organizational Citizenship Behavior Checklist (OCB-C) measured OCB. The OCB-C used a 5-point Likert scale that the participants used to indicate the frequency that they had performed the action in the past, ranging from *Never* (1), *Once or Twice per Month* (3), and *Everyday* (5). An example item included, "Finished something for co-worker who had to leave early." The 20 items from the OCB-C were averaged to create a single OCB score. Each of the 20 items, ranging from 1 to 5, created a total possible score of 100. This score was added to the supervisor-rated OCB-C total score, which was obtained through the same process. Higher scores indicated higher levels of OCB.

Psychological Job Demand Scale. Moen, Kelly, and Lam's (2013) 6-item Psychological Job Demands Scale operationalized job demand. Participants rated their level of agreement with the statements with respect to the characteristics of their job from *Strongly Disagree* (1) to *Strong Agree* (7). An example item included "I do not have enough time to get my job done." The 6 items from the JD scale were averaged to create a total JD score. With 6 items ranging from 1-7, the highest possible score was 42, indicating a perceived condition with higher job demands.

Supervisor Support Measures. Ford and Wooldridge's (2012) 9-item Supervisor Support Measures measured psychological job resources (JR). This JR scale was chosen to parallel the psychological JD scale. Although it was not involved in formal hypothesis

testing, it was included for exploratory analysis. Participants rated their level of agreement with the statements with respect to the characteristics of their supervisors (or professors) from *Strongly Disagree* (1) to *Strong Agree* (7). There were two subscales: supervisor support task and supervisor family support. An example item for supervisor task support subscale included “My supervisor has realistic expectations. An item from the supervisor family support subscale included: “My supervisor is responsive when I have personal/family business to take care of.” The 9 items from the supervisor support scale were averaged to create a total JD score. With 9 items ranging from 1-7, the highest possible score was 63, indicating a perceived condition with better supervisor support (i.e. higher job resources).

Internal Consistency. All scales had acceptable internal consistencies, with alpha coefficients ranging from $\alpha = .83$ to $\alpha = .92$ (Santos, 1999). The T1 and T2 reliabilities of the MASS in the current study were $\alpha = .84$ and $\alpha = .88$, respectively. The T1 and T2 reliabilities of the authenticity scale were $\alpha = .85$ and $\alpha = .89$, respectively. The T1 and T2 reliabilities of the OCB-C scale were $\alpha = .90$ and $\alpha = .92$, respectively. The T1 and T2 reliabilities of the Psychological Job Demands Scale were $\alpha = .83$. The T1 and T2 reliabilities of the Supervisor Support Measures scale were $\alpha = .89$ and $\alpha = .91$, respectively. Since not enough participants participated in all three time points, T3 was not included in this data analysis, as the undersampling was believed to negatively affect the statistical power of the study.

Results

Common Method Variance. Common method variance (CMV) has the potential to create spurious internal consistency, which is caused by variables determined by the same source (i.e. rater) (Chang, Van Witteloostuijn, & Eden, 2010). Podsakoff and Organ (1986) suggest Harmon's single-factor test to address this potential CMV problem by including all variables in a factor analysis to ensure no single factor accounts for the majority of the covariance between the independent and criterion variables. All survey items were included in a factor analysis, with no one variable accounting for more than 12.98% of variance (Table 1). This did not raise concern, as the first factor did not explain more than 50% of variance among the variables (Podsakoff & Organ, 1986).

Table 1
Harman's One-Factor Test

Component	% of Variance	Cumulative %
1	12.98	12.98
2	11.86	24.84
3	6.4	31.24
4	4.61	35.84
5	4.1	39.94
6	3.09	43.04
7	2.91	45.95
8	2.67	48.62
9	2.37	50.99
10	2.17	53.16

Extraction Method: Principal Component Analysis

Correlations. Bivariate correlation analysis was performed to evaluate the initial relationships between mindfulness (M), authentic functioning (AF), organizational citizenship behavior (OCB), job demands (JD), and job resources (JR) before conducting additional analyses. These correlation coefficients can be found in Table 2.

Table 2
T1 and T2 Correlations

	AF1	OCB1	JD1	JR1	M2	AF2	OCB2	JD2	JR2
M1	.250***	-.04	-.002	.15	.671***	.16	-.09	.02	.15
	.00	.66	.98	.09	.00	.07	.33	.80	.08
AF1		.09	-.05	.31***	.260***	.543***	.05	-.11	.26**
		.29	.58	.00	.00	.00	.54	.19	.01
OCB1			.20*	.05	-.03	.19*	.69***	.06	.06
			.02	.58	.69	.03	.00	.49	.46
JD1				-.22*	-.15	-.12	.09	.41***	-.15
				.01	.09	.18	.28	.00	.08
JR1					.23**	.30***	.17	-.12	.55***
					.01	.00	.05	.18	.00
M2						.31***	-.09	-.13	.34***
						.00	.31	.14	.00
AF2							.19*	-.17*	.35***
							.03	.04	.00
OCB2								.20*	.14
								.02	.10
JD2									-.24**
									.01

*p < .05, **p < .01, ***p < .001

M = Mindfulness
 AF = Authentic Functioning
 OCB = Organizational Citizenship Behavior
 JD = Job Demands
 JR = Job Resources

Regressions. Initial regression analyses were performed to determine if an SEM analysis would be feasible with the existing relationships between the variables. Mindfulness at T1 significantly predicted AF at T1 ($\beta = .34, t(132) = 3.21, p < .01$), which supported the hypothesized predictive relationship between the predictor variable (i.e. mindfulness) and mediator variable (i.e. AF). AF at T1 did not significantly predict OCB at T2 ($\beta = .05, t(132) = 0.61, p = .54$), which did not support the mediator component of the hypothesized moderated mediation model. Mindfulness at T1 did not significantly predict OCB at T2 ($\beta = -.09, t(132) = -0.98, p = .33$). This did not support the hypothesized predictive relationship between the predictor variable (i.e. mindfulness) and criterion variable (i.e. OCB). Thus, the originally planned SEM analysis was not conducted, and the hypothesized moderated-mediation model was unable to be empirically supported.

Exploratory Analyses. The exploratory correlations (see Table 2) indicated that even though mindfulness at T2 was also correlated with AF at T1, mindfulness at T1 and AF at T2 did not share a statistically significant correlation coefficient. Even though AF at T1 was not correlated with OCB at T1 or T2, AF at T2 was correlated with OCB at T1 and T2.

Additionally, the correlational analysis revealed that job resources (JR) at T1 and AF at T2 were significantly correlated with mindfulness at T2. JR at T1 predicted mindfulness at T2 ($\beta = .23, t(132) = 2.75, p < .01$). There were no interaction effects between JR at T1 and the average of JD scores at T1 and T2 to predict mindfulness at T1

($\beta = .063$, $t(132) = -0.73$, $p = .47$). There were also not any interaction effects between JR and gender ($\beta = -.12$, $t(132) = -0.75$, $p = .46$) to predict mindfulness at T1.

T3 Analyses. Exploratory analyses were conducted on data from T3. All scales were internally reliable, as demonstrated by their Cronbach's alpha values (MAAS: $\alpha = .90$, AF: $\alpha = .85$, OCB: $\alpha = .91$, JD: $\alpha = .83$, and JR: $\alpha = .92$). Principal component analysis revealed that no single factor accounted for more than 12.30% of variance, so common method variance was not assumed to have a significant impact on the results. Mindfulness at T1 did not predict OCB at T3 ($\beta = .04$, $t(82) = -0.36$, $p = .72$). AF at T2 did not predict OCB at T3 ($\beta = .02$, $t(82) = .19$, $p = .85$). Unlike its non-significant negative correlations with OCB at T1 and T2, M1 shared a non-significant positive correlation with OCB at T3 ($r(82) = .04$, $p = .72$).

Discussion

The results of this study suggest that mindfulness has no effect on OCB. That is, mindfulness at T1 predicted AF at T1. However, AF at T1 did not predict OCB at T2, nor did mindfulness predict OCB at T1 or T2. Therefore, the findings do not support the hypothesized moderated mediation model. In fact, mindfulness and OCB at T1 and T2 shared non-significant negative correlation coefficients. However, this particular finding does not coincide with the positive relationship between mindfulness and OCB that has been statistically significant in previous research (Allred, 2012; Patel, 2017). OCB at T3 non-significantly positively correlated with mindfulness at T1, which exhibits the data's pattern across a longer period of time that supports previous research. An explanation for this lack of significance could be that largely attributed to the methodological design of

this study. Mindfulness and AF were both cognitive concepts that were used to predict the behavior of OCB; however, the OCB-C was a self-rated questionnaire, not a behavior-based measure. The methodological limitations will be further explained in the next subsection.

An unexpected exploratory analysis finding was that JD and OCB shared a statistically significant correlation. That is, higher JD was associated with higher levels of prosocial behavior (i.e. OCB). This contradicts previous research findings that higher levels of demand and stress in one's personal sphere decrease the propensity to partake in other-oriented discretionary helping behavior. For instance, Cropanzano, Rupp, and Byrne (2003) found emotional exhaustion to negatively predict OCB directed toward the organization. Furthermore, Bragger, Rodriguez-Srednicki, Kutcher, Indovino, and Rosner (2005) found that time-based work-family conflict, a contributing source of job demands, negatively predicted OCB.

Further exploratory analyses revealed findings that suggest JR positively predicts mindfulness. Implications of these results allude to the benefits of job resources in cultivating personal engagement (i.e. mindfulness' nonjudgmental present moment awareness) and value-behavior alignment (i.e. authenticity) among individuals. This supports previous literature that has found job resources to share positive relationships with engagement and negative relationships with burnout (Crawford, LePine, & Rich, 2010; Mauno, Kinnunen, & Ruokolainen, 2007). An additional exploratory finding included that there was no interaction effect between JR and gender on predicting mindfulness. Thus, the variable of gender did not affect the main effect of JR positively

predicting mindfulness. This could suggest that the job resource of perceived supervisor support transcends the notion of gender and can positively predict the outcome variable of mindfulness.

Limitations. As mentioned previously, there were various methodological weaknesses that could have limited the quality of the findings and/or the lack of significant findings in this study.

Self-rated. The initial methodological plan included collecting data on multi-rater scales in the study. However, this was unable to be realized due to logistical constraints. Chang et al. (2010) calls for more *ex ante* solutions that are enacted before the data analysis step of the research process. This multi-source rater aspect of the study design could have better addressed any possible common method bias by collecting data from only one type of data source (i.e. self-ratings). The self-reported data are especially vulnerable to faking good and social desirability bias, as well as fatigue effects. It would have been more ideal for OCB to have been both self-rated and supervisor-rated at T3 (i.e. Fox et al.'s (2012) Supervisor-rated Organizational Citizenship Behavior Checklist). This would have provided a new rater-source to the study, as well as a distinct behavioral-based observation rating from the other-rater.

Although this study included longitudinal data, which Malhotra, Schaller, and Patil (2017) suggested collecting in order to address CMV, this study lacked a behavioral measure that was “objectively” based on the participants’ explicit actions (as observed by a supervisor or other rater as objectively as possible). This non-self reported

questionnaire could have acted as a procedural remedy to any other possible CMV from a single source of respondent (Malhotra et al., 2017).

Traits and Time. It is important to note that mindfulness was conceptualized as a more stable trait instead of a transitory, induced state, which is not a new concept in mindfulness literature (Reb, Narayanan, & Chaturvedi, 2014). Additionally, trait authenticity was operationalized by authentic functioning (Martinez et al., 2017). Thus, temporally separating the predictor and mediator variable (i.e. less dynamic trait variables) should not have been as imperative as for the predictor (i.e. trait mindfulness) and criterion (i.e. non-trait OCB) variables. Nevertheless, the variability between correlational and predictive relationships of the same trait variable taken from different times brings into question the true static nature of trait characteristics (Brown and Ryan, 2003; Hülshager, Lang, Depenbrock, Fehrman, Zijlstra, & Alberts, 2014).

Scale Anchors. Even though the items are similar, future studies could use Leroy, Anseel, Gardner and Sels' (in press) 16-item authentic functioning index with a more explicitly labeled and anchored 5-point Likert scale in place of Martinez et al.'s (2017) authenticity scale to operationalize AF (Appendix C). Although this is a minute detail, Weng (2004) found that scale format affected the reliability of Likert rating scales. Scales with fewer anchor labels tended to have lower reliability, especially test-retest reliability (Weng, 2004). This could explain the staggered significant and non-significant relationships AF shared with the other variables.

Univariate and Multivariate Outlier Analysis. Outlier analyses were conducted in order to further assess the quality of this study's findings. Univariate analysis was

conducted to find one outlier with a z-score with an absolute value greater than 3.29 on the job resources scale at T1 (-3.32) and T2 (-3.72). Additionally, multivariate analysis was conducted with Mahalanobis distance. There were nine outliers with a p-value of less than .001 using the cumulative distribution function for chi-square. This probability value referred to the cumulative probability that the value was from the chi-square distribution. Because of the low frequency of outliers, it is unlikely that they influenced the results' levels of significance in a significant manner.

Undersampling & Generalizability. Because T3 suffered great attrition, it is probable that the resulting undersampling compromised the statistical power of this study. This compromised the longitudinal component (i.e. three time points: T1-T3) of the study. Additionally, the sample pool composition was not ideal, as the majority of participants were undergraduate students (115/134; 85.82%) who had not yet taken part in full-time employment experiences. And, although the academic sphere is the undergraduate student's primary "workplace," the findings of this study should not be generalized to implications in the workplace. Even though mindfulness, authenticity, and prosocial helping behavior are theoretically universally applicable in myriad contexts, OCB has been conceptualized specifically in an organizational context, which provides a distinct set of conditions to those of the academic realm. For instance, undergraduate students do not receive a salary for their "job role" as a full-time pupil.

Future Directions. Murphy (1983) explained the importance of cross-validation on independent groups of employees, so future steps to take would include retesting this new theoretical model on a larger sample of full-time employees who are working as

“non-students” in an organizational setting using a variety of raters (i.e. self, supervisor, and peers) and a range of cross-cultural contexts. Although the next step would initially be to simply evaluate full-time workers, another line of future research could address any potential differences in OCB between part-time and full-time employees.

Counterproductive work behavior and unwanted organizational citizenship behavior should also be taken into account. Although employees may offer their unsolicited help with good intentions, the outcomes of their helping behavior as perceived by the OCB-recipient should also be considered in future studies (Spector, Bauer, & Fox, 2010; Dalal, 2005).

This study was unique in that it addressed “employee” mindfulness’ effect on employee outcome (i.e. OCB) rather than the more conventional leader mindfulness’ effect on employee OCB (Reb, Narayanan, & Chaturvedi, 2014; Pinck& Sonnentag, 2017). It also sought to use worker engagement as the overarching principle linking all of the variables in a moderated mediation model, in which authenticity could explain the positive effect of mindfulness on OCB, and job demands was shown to moderate the degree to which mindfulness influenced OCB. Improved versions of this study still have the potential to yield results that may possess possible implications of mindfulness and authentic leadership being valuable practices in facilitating the cultivation of corporate social responsibility and more productive prosocial organizational interactions. With future studies that are methodologically more rigorous, it should become undoubtedly clearer that mindfulness matters.

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Appendix A(a)

Informed Consent: Well-Being in the Workplace Survey (Undergrad)

You are being invited to participate in a research study, which the Claremont McKenna College Institutional Review Board (IRB) has reviewed and approved for conduct by the investigators named here. You are entitled to a copy of this form. If you have any questions or complaints about the informed consent process of this research study or your rights as a subject, please contact the IRB at the Claremont McKenna College Office of Institutional Research at (909) 607-8395 or IRB@cmc.edu.

Project Title: Well-Being in the Workplace

Principal Investigator: Rowan Mulligan

In this study, I am interested in examining well-being in the workplace. Participants will be asked to answer questions related to their well-being. All three administrations of this survey (3-4 weeks apart) will be approximately 15 minutes. I do not expect that this survey will cause any psychological or psychical harm out of the realm of daily discomfort. When answering the items on the survey, I do not expect you to experience any fatigue, discomfort, or negative feelings worse than experienced in daily life.

The study may increase your level of self-understanding or incite a process of self-reflection. Your information and answers will remain confidential. Your personally identifying information will be stored separately from your survey responses. As a result of your participation in this study, you will receive 0.5 research credit hours at each of the three survey administrations for a total of 1.5 credits/extra-credit as specified by your professor.

Your participation in this study is completely voluntary. If, at any time during this study, you would like to stop your participation, please notify the researcher (rmulligan18@cmc.edu). You may refuse to answer any questions. You will not be penalized. If you have any questions about the study or your participation, please feel free to contact the researcher. Thank you again for your participation!

I hereby certify that I understand the contemplated study and its risks and potential complications.

- I, ___ (fill in the blank below with first and last name as an electronic signature) _____, give my consent to participate in this study, entitled "Well-Being in the Workplace."
- I do NOT give my consent to participate in this study, entitled "Well-Being in the Workplace."

Appendix A(b)

Informed Consent: Well-Being in the Workplace Survey (MBA)

You are being invited to participate in a research study, which the Claremont McKenna College Institutional Review Board (IRB) has reviewed and approved for conduct by the investigators named here. You are entitled to a copy of this form. If you have any questions or complaints about the informed consent process of this research study or your rights as a subject, please contact the IRB at the Claremont McKenna College Office of Institutional Research at (909) 607-8395 or IRB@cmc.edu.

Project Title: Well-Being in the Workplace

Principal Investigator: Rowan Mulligan

In this study, I am interested in examining well-being in the workplace. Participants will be asked to answer questions related to their well-being. All three administrations of this survey (3-4 weeks apart) will be approximately 15 minutes. I do not expect that this survey will cause any psychological or psychical harm out of the realm of daily discomfort. When answering the items on the survey, I do not expect you to experience any fatigue, discomfort, or negative feelings worse than experienced in daily life.

The study may increase your level of self-understanding or incite a process of self-reflection. Your information and answers will remain confidential. Your personally identifying information will be stored separately from your survey responses. As a result of your participation in this study, you will receive extra-credit as specified by your professor.

Your participation in this study is completely voluntary. If, at any time during this study, you would like to stop your participation, please notify the researcher (rmulligan18@cmc.edu). You may refuse to answer any questions. You will not be penalized. If you have any questions about the study or your participation, please feel free to contact the researcher. Thank you again for your participation!

I hereby certify that I understand the contemplated study and its risks and potential complications.

- I, ___ (fill in the blank below with first and last name as an electronic signature) _____, give my consent to participate in this study, entitled "Well-Being in the Workplace."
- I do NOT give my consent to participate in this study, entitled "Well-Being in the Workplace."

Appendix B

Mindfulness: Brown and Ryan’s (2003) MAAS

Day-to-Day Experiences

Instructions: Below is a collection of statements about your everyday experience. Using the 1-6 scale below, please indicate how frequently or infrequently you currently have each experience. Please answer according to what really reflects your experience rather than what you think your experience should be. Please treat each item separately from every other item.

1	2	3	4	5	6
Almost	Very	Somewhat	Somewhat	Infrequently	Almost
Always	Frequently	Frequently	Infrequently		Never

I could be experiencing some emotion and not be conscious of it until some time later. (M1)

I break or spill things because of carelessness, not paying attention, or thinking of something else. (M2)

I find it difficult to stay focused on what’s happening in the present. (M3)

I tend to walk quickly to get where I’m going without paying attention to what I experience along the way. (M4)

I tend not to notice feelings of physical tension or discomfort until they really grab my attention. (M5)

I forget a person’s name almost as soon as I’ve been told it for the first time. (M6)

It seems I am “running on automatic,” without much awareness of what I’m doing. (M7)

I rush through activities without being really attentive to them. (M8)

I get so focused on the goal I want to achieve that I lose touch with what I’m doing right now to get there. (M9)

I do jobs or tasks automatically, without being aware of what I'm doing. (M10)

I find myself listening to someone with one ear, doing something else at the same time. (M11)

I drive places on ‘automatic pilot’ and then wonder why I went there. (M12)

I find myself preoccupied with the future or the past. (M13)

I find myself doing things without paying attention. (M14)

I snack without being aware that I’m eating. (M15)

Appendix C

Authentic Functioning: Martinez and Sawyer's (2017) Authenticity Scale

As students, your primary workplace is often school, and your supervisors often professors. Please use your school and work experiences when answering the following questions.

1	7
Never	All the Time

Action authenticity

At work, how often do you feel like your perceptions of your identity are inconsistent with your outer appearance and behavior? * (A_A1)

At work, how often do you feel like your inner identity does not match your outward appearance and actions? * (A_A2)

At work, how often do you feel like your external identity and outward conduct do not align with the ways in which you perceive your identity inside? * (A_A3)

1	7
Strongly Disagree	Strongly Agree

Relational authenticity

- People at work perceive my identity in the same way that I do. (A_R1)
- My coworkers' perceptions of my identity match my own perception of my identity. (A_R2)
- People at work refer to me using adjectives that match those I use for myself. (A_R3)
- There's a lack of alignment between the ways in which people at work view my identity and the ways in which I view my identity. * (A_R4)

* = Reverse Coded

Appendix D

OCB: Fox et al.'s (2012) Organizational Citizenship Behavior Checklist (OCB-C)

As students, your primary workplace is often school, and your supervisors often professors. Please use your school and work experiences when answering the following questions.

How often have you done each of the following things on your present job?

1	2	3	4	5
Never	Once or Twice	Once or Twice Per Month	Once or Twice Per Week	Everyday

1. Picked up meal for others at work. (OCB 1)
2. Took time to advise, coach, or mentor a co-worker. (OCB 2)
3. Helped co-worker learn new skills or shared job knowledge. (OCB 3)
4. Helped new employees get oriented to the job. (OCB 4)
5. Lent a compassionate ear when someone had a work problem. (OCB 5)
6. Lent a compassionate ear when someone had a personal problem. (OCB 6)
7. Changed vacation schedule, work days, or shifts to accommodate co-worker's needs. (OCB 7)
8. Offered suggestions to improve how work is done. ((OCB 8)
9. Offered suggestions for improving the work environment. (OCB 9)
10. Finished something for co-worker who had to leave early. (OCB 10)
11. Helped a less capable co-worker lift a heavy box or other object. (OCB 11)
12. Helped a co-worker who had too much to do. (OCB 12)
13. Volunteered for extra work assignments. (OCB 13)
14. Took phone messages for absent or busy co-worker. (OCB 14)
15. Said good things about your employer in front of others. (OCB 15)
16. Gave up meal and other breaks to complete work. (OCB 16)
17. Volunteered to help a co-worker deal with a difficult customer, vendor, or co-worker. (OCB 17)
18. Went out of the way to give co-worker encouragement or express appreciation. (OCB 18)
19. Decorated, straightened up, or otherwise beautified common workspace. (OCB 19)
20. Defended a co-worker who was being "put-down" or spoken ill of by other co-workers or supervisor. (OCB 20)

Appendix E

Job Demands: Moen, Kelly, and Lam's (2013) Psychological Job Demands Scale

As students, your primary workplace is often school, and your supervisors often professors. Please use your school and work experiences from the past FOUR weeks when answering the following questions.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree

1. I do not have enough time to get my job done. (JD_1)
2. My job requires very fast work. (JD_2)
3. My job requires very hard work. (JD_3)
4. My job requires excessive work. (JD_4)
5. My job involves conflicting demands. (JD_5)
6. I have many interruptions and disturbances in my job. (JD_6)

Appendix F

Job Resources: Ford and Wooldridge's (2012) Supervisor Support Measures

As students, your primary workplace is often school, and your supervisors often professors. Please use your school and work experiences from the past FOUR weeks when answering the following questions.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree

Supervisor Support Task

1. My supervisor keeps me informed of things needed to do the job. (JR_T_1)
2. My supervisor has realistic expectations. (JR_T_2)
3. My supervisor recognizes when I do a good job. (JR_T_3)
4. My supervisor is supportive when I have a work problem. (JR_T_4)

Supervisor Family Support

5. My supervisor is fair in responding to personal/family needs. (JR_F_1)
6. My supervisor is responsive when I have personal/family business to take care of. (JR_F_2)
7. My supervisor is understanding when I talk about personal/family needs that affect work. (JR_F_3)
8. I feel comfortable bringing up personal/family issues with my supervisor. (JR_F_4)
9. My supervisor really cares about the impact of work on personal/family life. (JR_F_5)

Appendix G

Introductory/Demographic Questions (Time 1-3)

Intro 1. Please identify the gender category with which you most identify

- Male (1) Female (2)

Intro 2. Program Institution

- WUHS (1)
 CU (2)
 MBA (3)
 CMC (4)

Intro 3. College Year

- First (1)
 Second (2)
 Third (3)
 Fourth (4)
 Fifth (5)
 Graduate (Please specify year) (6) _____
 Other (Please specify) (7) _____

Intro 4. Major _____

Intro 5. Age _____

Intro 6. Race

- American Indian or Alaskan Native (1)
 Asian (2)
 African-American (3)
 Native Hawaiian or Pacific Islander (4)
 Caucasian (5)
 Other (Please specify) (6) _____

Intro 7. GPA (4.00 scale) _____

Intro 8. Email (that you frequently use; Please use same one for all three surveys) _____

Appendix H

First Acknowledgement Form (Time 1)

Thank you for completing this first survey of the three-part study for my honors senior thesis. I look forward to your next responses in 3-4 weeks.

Warmly,

Rowan

Rowan Mulligan
Claremont McKenna College | Class of 2018
rmulligan18@cmc.edu

Appendix I

Second Acknowledgement Form (Time 2)

Thank you for completing this second survey of the three-part study for my honors senior thesis. I look forward to your next response in 3-4 weeks.

Warmly,

Rowan

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Appendix J

Final Debriefing Form (Time 3)

Thank you for completing all three surveys. Although the study was introduced to you as “Well-Being in the Workplace,” its real title is “Mindfulness, Authentic Functioning, and OCB as Moderated by Job Demands.” It was imperative that you did not know the true nature of the study while filling out the survey items.

This experiment was conducted to complete my honors senior thesis. The purpose of this study is to examine the effects of mindfulness and authentic functioning on organizational citizenship behavior (OCB), as well as how job demand may influence the entire process. That is, this study focuses on the way in which a mindful individual, who is nonjudgmentally aware of his or her present moment internal and external surrounding, may tend to exhibit more OCB, nondiscretionary behavior that goes above and beyond the formal work role to promote organizational functioning and well-being in the workplace. This pathway may be fostered through authentic functioning, action guided by self-awareness and personal values. The external stressor of job demand was also evaluated to determine if it influenced this process of well-being to manifested action. I hypothesized that authentic functioning would explain the effect of mindfulness on OCB. I also hypothesized that job demands would influence the effect of authentic functioning on OCB and the effect of mindfulness on OCB.

Thank you again for your participation! If you would like to learn more about this experiment, please see the citations below. If you have any questions/concerns, please feel free to contact me.

All the best,

Rowan Mulligan
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References

- Babcock-Roberson, M. E., & Strickland, O. J. (2010). The relationship between charismatic leadership, work engagement, and organizational citizenship behaviors. *The Journal of psychology, 144*(3), 313-326.
- Baron, L. (2016). Authentic leadership and mindfulness development through action learning. *Journal of Managerial Psychology, 31*(1), 296-311.
- Leroy, H., Anseel, F., Dimitrova, N. G., & Sels, L. (2013). Mindfulness, authentic functioning, and work engagement: A growth modeling approach. *Journal of Vocational Behavior, 82*(3), 238-247. doi:10.1016/j.jvb.2013.01.012

Appendix K
Reminder Email Example

Hi all,

Thank you for your participation in Part 1 of 3 in this Well-Being in the Workplace study. This is a reminder that **Part 2 of 3** will be available to fill out for one week, **Feb 20 through Feb 27**.

Survey link:

https://claremontmckenna.co1.qualtrics.com/jfe/form/SV_6JYtdntwPO0A3r

Thanks again for your continued participation in this longitudinal study!

Warmest regards,

Rowan

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