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Author(s) Hanna Suh, Shin Ye Kim and Eleanor A. McCabe

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Profiles of Mindfulness and Difficulties in Emotion Regulation and Links to Work-Family-School Conflict

Hanna Suh

National Institute of Education, Nanyang Technological University

Shin Ye Kim

Texas Tech University

Eleanor A. McCabe

University at Buffalo

Journal of American College Health (Advance online publication)

Hanna Suh, Psychology and Child & Human Development Academic Group, National Institute of Education, Nanyang Technological University, Singapore. Shin Ye Kim, Department of Psychology, Texas Tech University, USA. Eleanor A. McCabe, Department of Counseling, School, and Educational Psychology, University at Buffalo, The State University of New York, USA.

Correspondence should be addressed to Hanna Suh, Psychology and Child & Human Development Academic Group, National Institute of Education, Nanyang Technological University, Singapore. E-mail: hanna.suh@nie.edu.sg

Abstract

Objective: We explored latent profiles among 194 first-year college students (64.4% women) based on mindfulness and difficulties in emotion regulation scores, and investigated each profiles' relations to work–family–school conflict (WFSC). Participants: A total of 194 first year college students (64.4% women) participated in this study. **Methods:** Latent profile analysis was utilized. **Results:** Three profiles emerged, characterized as the "healthy" profile (57.5%), the "observant yet judgmental" profile (33.3%) and the "unhealthy without strategies" profile (9.2%). The "healthy" profile showed (a) significantly lower scores on all conflict domains compared to the "observant yet judgmental" profile, and (b) significantly lower scores on all behavior-based conflicts regardless of the domains, compared to the "unhealthy without strategies" profile. The difference between the "observant yet judgmental" profile and "unhealthy without strategies" profile appeared in family-school time. Results indicate that mindfulness and healthy emotion regulation capacity function as protective factors to WFSC. Conclusions: Our findings hold strength in explicating profiles that would otherwise have not been detected when exploring mindfulness and difficulties in emotion regulation independently.

Keywords: Mindfulness, Difficulties in Emotion Regulation, Work-Family-School Conflict, First-year College Students, Latent Profile Analysis

Profiles of Mindfulness and Difficulties in Emotion Regulation and Links to Work-Family-School Conflict

With two domains of work and family being central in many individuals' lives, the conflict arising from managing work-family interface has received much attention for its importance and its implications for individual well-being, work outcomes, and family-related outcomes. 1,2 Work-to-family conflict (WFC) indicates a conflict that arises due to work issue spilling over to familial context, whereas family-to-work conflict (FWC) indicates a conflict that arises due to familial issue spilling over to work domain. Extending literature on WFC, Olson³ developed a work-family-school conflict (WFSC) measure to reflect the interfaces of multiple roles that college students partake in, noting the common primary role (student) and primary context (school) in which many college students function. In addition to the student role, more than 41% of full-time college students worked while in school⁴ and took on the worker role and some students balanced family duties and other non-academically related roles. Surely, managing each of these domains of school, work, and family is a challenge, but such challenge only exacerbates when having to manage multiple roles at once. Indeed, emerging literature on undergraduate students' multiple role engagement suggests that employment for college students has been consistently related with psychological as well as academic and work outcomes.⁵ For instance, increased work hours affected students to feel overwhelmed and sleep poorly.⁶ Instability in family affected student psychological distress and academic achievement.⁷ Furthermore, WFSC was positively associated with college students' burnout, school and work stress and depressive symptoms.⁸ Thus, assessing conflicts arising from managing roles in work, family, and school is a relevant and accurate reflection of college student lives, and is an

essential step in brainstorming what interventions can be developed to reduce these likely role conflicts.

Individual differences influence WFC and WFSC. In a meta-analysis, Eby et al⁹ identified individual difference factors such as personality (agreeableness, emotional instability) and motivational traits (self-esteem, needs, values), among others, to be predictive of WFC. They found that about 4.7% of articles (from 1980-2002) explored the individual differences factor in predicting WFC. Michel and Clark¹⁰ also explored the role of dispositional positive and negative affect influencing individuals to perceive and interpret a given situation in divergent ways, leading to either WFC or enrichment. Detailing which individual difference factors affect WFC and WFSC is important because while some individual difference factors (e.g., temperament) are likely to be stable over time, other individual difference factors (e.g., coping styles, mood) are more malleable to change. Particularly, exploring factors that are malleable to change gives hints at what interventions should be set up to reduce WFSC among first-year college students.

Two relevant individual differences factors regarding perceiving and responding to emotions (mindfulness, difficulties in emotion regulation) may function as antecedents to WFSC. Mindfulness is essentially a present moment awareness of unfolding inner and external experiences that become available through paying undivided attention, intentionally, and with full acceptance. Although much literature on mindfulness focuses on mindfulness as a cultivated skill through interventions, Baer et al. defined dispositional mindfulness and considered observing, describing, acting with awareness, nonjudgment, and nonreactivity to be reflective of dispositional mindfulness. Whereas dispositional mindfulness refers to the bare observation and acknowledgement of emotion, emotion regulation refers to modulation of emotional arousal and acting in a desirable way despite a disturbing emotional state,

accompanied by awareness and understanding of one's emotions.¹³ In relation to WFC, it was found that mindfulness positively predicts work-family balance.¹⁴

Dispositional mindfulness and emotion regulation are closely associated yet are distinct. In a recent review, Tomlinson et al¹⁵ found that dispositional mindfulness is associated with better emotional processing and emotion regulation with facets of mindfulness such as nonreactivity, describing, and nonjudging, inversely predicting difficulties with emotion regulation. Similarly, Pepping et al¹⁷ found that low dispositional mindfulness is associated with psychosocial symptoms through two aspects of emotion regulation (non-acceptance of emotions, limited access to emotion regulation strategies). When explored in relation to outcomes, Dixon and Overall¹⁸ found dispositional mindfulness and emotion regulation separately predicting stress.

With first year college students, considering how their tendency towards acknowledging and dealing with emotions affects overall functioning is especially relevant. This is because first year in college is a transitional stage into emerging adulthood marked by increased emotionality. First year college students adjust to a new school culture and procedures, having to learn how to exercise self-agency such as newly claimed independence and self-control. They also learn how to create appropriate social boundaries that will enrich and deepen their social relationships. In short, students are exposed to a myriad of new enticing opportunities to "test out" how to practice independence and self-control, on domains ranging from health (personal hygiene, healthy lifestyles) to academic and social functioning. In the midst of such adjustment, it is crucial that one be able to accurately acknowledge emotions and effectively deal with them. With awareness of emotions and healthy emotion regulation skills, students can both cope with stress and can make sound decisions. Thus, knowing one's emotions and having

internal tools to deal with them serves a dual purpose of making one more resilient to overcome stress while providing a sound platform upon which important life-decisions can be made.

Indeed, changes in emotion regulation positively predicted changes in adjustment among first year students.²¹

Noting the beneficial effects of cultivating mindfulness and healthy emotion regulation, some programs have been implemented with first year students to aid their psychosocial adjustment and healthy transition, with components directly focusing on increasing mindfulness²² and increasing emotion regulation.²³ These studies highlight the protective effects of mindfulness and emotion regulation and explore ways to implement these targeted interventions to increase mindfulness and healthy emotion regulation. Yet, these studies do not seem to simultaneously explore mindfulness and emotion regulation patterns among first year students, and even scarce is exploring whether and how these patterns are related to WFSC.

Congruence theory²⁴ helps understand how mindfulness and difficulties in emotion regulation affect WFSC. Congruence theory posits that a third variable is responsible for incurring similar influences on two domains. In this regard, high mindfulness and healthy emotion regulation capacity will affect work, family, and school domains similarly (positively). On the contrary, low mindfulness and lack of healthy emotion regulation capacity will similarly (negatively) affect work, family, and school domains, likely resulting in high WFSC. Congruence theory highlights that an undergirding common cause that went unacknowledged may actually be an important factor that predicts WFSC.

Employing a profile analysis approach can aid in understanding how each facet of dispositional mindfulness and emotion regulation manifest simultaneously. Mindfulness and emotion regulation both involve awareness and monitoring of emotions, but emotion regulation

additionally refers to modifying emotions through utilizing strategies (e.g., controlling impulses, still engaging in goal-directed behaviors). If exploring simultaneously, for example, there could be a profile of individuals high in awareness as assessed by both mindfulness and emotion regulation scales but lacking in specific emotion regulation strategies. There could be another profile who might not be aware of their emotions in the first place. Previous studies mostly identified four-class solutions for mindfulness^{25,26} while the number of profiles on difficulties in emotion regulation are mixed.²⁷ Hence, we did not presuppose how many profiles will emerge in this study.

Method

Participants and Procedure

This study was approved by the university institutional review board. All participants were recruited from undergraduate introduction to psychology courses in a large Southwestern university and students consented to take part in the study in return for research credits. All participants were recruited in the 2017-2018 academic year. Participants visited the research lab as part of a larger study and responded to study questionnaires, among other measures, using an online survey platform Qualtrics. All participants provided informed consent before participation, and the survey took approximately 30 minutes to complete. There were no exclusion criteria for participation and the inclusion criteria was that students be 18 years and older.

Measures

Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer¹³). This scale consists of 36 items composed of six dimensions: Non-acceptance of Emotional Responses, Difficulties Engaging in Goal-Directed Behavior, Impulse Control Difficulties, Lack of

Emotional Awareness, Limited Access to Emotion Regulation Strategies, and Lack of Emotional Clarity. The dimensions are responded using a 5-point Likert scale (1 = almost never [0-10%], 5 = almost always [91-100%]). Sample items include "When I'm upset, I feel guilty for feeling that way" (non-acceptance of emotional responses) and "When I'm upset, I feel out of control" (impulse control difficulties). In the original validation study of the DERS by Gratz and Roemer, 13 overall internal consistency was high ($\alpha = .93$), with acceptable subscale internal consistency ($\alpha > .80$) and adequate construct and predictive validity.

Five Factor Mindfulness Scale (FFMQ; Baer et al¹²). The FFMQ is composed of 39 items that reflects five subscales: Observing, Describing, Acting with Awareness, Non-judging of Inner Experience, and Non-Reactivity to Inner Experience. All items on this scale are responded using a 5-point Likert scale (1 = never or very rarely true, 5 = very often or always true). Sample items include "When I'm walking, I deliberately notice the sensations of my body moving" (observing) and "I'm good at finding words to describe my feelings" (describing). In the validation study of the FFMQ with college students, Baer and colleagues¹² found acceptable internal consistency for all five subscales (αs ranged from .75 to .91) with strong incremental, convergent, and discriminant validity.

Work-Family-School Conflict (WFSC; Olson³). The WFSC assesses participants' self-reported degrees of conflict in the domains of work, family, and school. This scale can be broken down into different subscales depending research questions. In this study, we focused on all combinations of work, family, and school interface that could be constructed. Specifically, the nature of conflict is delineated into time-based, strain-based, and behavior-based and the interference between two domains (Work to School, School to Work, Family to School, School to Family) results in 12 outcomes. The scores for these 12 subscales were constructed by taking

the average of the items that they consist of. Composed of 36 items, each item is rated on a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree). Higher scores indicate more conflict in each of the paired domains. Sample items include "Due to all the pressures at work, sometimes when I go to school, I am too stressed to do school work" (strain-based; work to school), "My job interferes with my responsibilities at school such as getting to school and finishing homework on time" (time-based; work to school), and "The behaviors I perform that make me effective at work do not help me to be a better student" (behavior-based; work to school). Olson³ reported Cronbach's alphas ranging from .86 to .95 in 12 subscales among college students. The WFSC demonstrated strong convergent validity with high demands for job/family/school and strong discriminant validity with job/family/school satisfaction.³

Data Analytic Strategy

Latent Profile Analysis (LPA) was conducted with M*plus* Version 8²⁸ using a robust maximum likelihood estimator. Analyses were based on the six dimensions of the DERS and five dimensions of the FFMQ. Residuals of the indicators were not allowed to covary modeling the local independence assumption.²⁹ We used 5,000 random sets of starting values, and with 100 iterations, 500 optimizations were used in the final stage. The log-likelihood values in the final stage were replicated across optimizations for all models.

In determining the number of latent classes, we followed Bauer and Curran's suggestions³⁰ on considering statistical (e.g., examination of fit indices and model comparisons), practical (e.g., model parsimony and meaning of each solutions), and theoretical implications to determine the best class solution representing the data. Model testing begins by exploring a single-class, latent profile model, given the possibility that statistically different underlying profiles may not exist. Thereafter, model comparisons were examined by comparing a k-class

model against a *k*-1 class model. Up to five latent profiles models were considered for testing. This was based on prior research utilizing cluster analytic and latent profile approaches to distinguish mindfulness,²⁶ although the exact number of profiles could not be ascertained due to the combination of difficulties in emotion regulation and mindfulness facets in constructing latent profiles. Fit indices, classification accuracy, and meaningfulness of the profiles were also considered.

The fit for the LPA models were based on the Bayesian Information Criterion (BIC; Schwartz³¹) and adjusted Bayesian Information Criterion (aBIC; Sclove³²), with relatively small numbers of BIC and aBIC indicating better fit. Entropy was used to gauge classification accuracy (range from 0 to 1), with higher scores indicating greater classification accuracy. The statistical model comparisons were based on examining the Lo-Mendell-Rubin test (LMR; Lo, Mendell, & Rubin³³) and the Bootstrap Likelihood Ratio Test (BLRT; McLachlan & Peel³⁴). Statistically significant improvement of fit by adding one more class was determined by examining the p-value when comparing neighboring class models (e.g., two vs. three, and three vs. four). Lastly, the size of the smallest class was considered. Previously, some researchers (e.g., Jung & Wickrama³⁵) pointed out that when an additional class yields a profile that is composed of a smaller size (e.g., proportionally less than 1.0% and/or numerically when n < 25), special attention and justification should be provided for its inclusion.

Results

Sample Descriptive Statistics. The sample of this study was a total of 194 first year college students (125 women, 69 men). Participant age ranged between 18 to 42 with an average age of 19.36 (SD = 2.98). Participants self-identified as White (54.9%), Hispanic (27.2%), African-American (6.2%), Multicultural/mixed race (6.2%), Asian (3.6%), Other (1.5%), and

Native American (0.5%). Descriptive statistics such as mean, standard deviation, correlations among indicators, and internal consistency appear in Table 1.

Latent Profile Analysis. Latent profile analysis results appear in Table 2. In examining latent profile models, the BIC values decreased from one- to four-class models. Statistical comparisons of k-class models to k-1 class models anchored to LMR and BLRT results revealed that the two-class model significantly improved compared to the one-class model. The three-class and four-class models showed significant BLRT but non-significant LMR results compared to k-1 class models, indicating that these models were not significantly better than previous class models. Inconsistencies between LMR and BLRT results might be attributable to the more restrictive distributional and model assumptions of the BLRT and the more robust features of LMR.²⁹ In situations with inconsistent LMR and BLRT results, favoring BIC and considering interpretability of the cases are recommended.³⁶ The BIC decreased until four-class model, indicating that the four-class model might be acceptable. However, entropy for the four-class model was low, and the interpretability of cases was vague. As such, after considering the p-value of inconsistent LMR and BLRT results (p = .08, p < .001), BIC, entropy, and interpretability of profiles, we accepted the three-class model.

Figure 1 depicts the pattern of mean scores across the latent classes of the three-class model. In the three-class model, average class probabilities for the most likely class membership were .95 .97 and .94 respectively. According to the most likely latent profile membership, one class represented 33.3% of the sample, with other two classes representing 57.5% and 9.2%, respectively. Means of DERS and FFMQ subscales of each classes were explored to aid class interpretation. Approximately 57.5% of students were classified into a "healthy" profile with lowest scores on difficulties in emotion regulation on all facets and high scores in mindfulness

facets compared to other profiles. Approximately 33.3% of students could be classified into an "observant yet judgmental" profile with high observing of present moment external and inner experiences with a scant of non-judgment of those experiences. In other words, this "observant yet judgmental" profile seemed to retain much of their internal experiences and were rather critical of those arising internal thoughts and emotions. Lastly, approximately 9.2% of students showed an "unhealthy without strategies" profile with highest difficulties in emotion regulation and generally low mindfulness scores. Specifically, this profile was characterized by a spike in limited access to emotion regulation strategies and elevation on impulsivity that were distinguishable from the other two profiles. Additionally, this profile also showed lowest observing and non-reactivity score, indicating that they do not know how to take notice of their inner experiences yet are caught up when distressing experiences arise, making them vulnerable to being consistently stirred up emotionally. Thus, not having access to ways to regulate emotions appears to be especially problematic and alarming for this profile.

Next, using the Auxiliary option (DU3STEP) in Mplus, we explored whether the means of WFSC differed across three latent classes. The DU3STEP uses a 3-step method that sets a latent categorical variable to explore relations to distal outcomes³⁷ and is useful when auxiliary variables have unequal means and variances. The DU3STEP results appear in Table 3. Indicators of WFSC among each of the profiles revealed that the "healthy" profile reported significantly low WFSC on all domains compared to the "observant yet judgmental" profile. Likewise, the "healthy" profile showed significantly lower levels of conflict compared to the "unhealthy without strategies" profile on all behavior-based domains. Lastly, there were no significant differences between "observant yet judgmental" and "unhealthy without strategies" profiles, except in FS time.

Discussion

The study assessed discrete patterns of mindfulness and difficulties in emotion regulation among first-year university students using latent profile analysis. A three-class solution – 1) healthy, 2) observant yet judgmental and 3) unhealthy without strategies – best represented the data. Approximately 58% of students were classified into the "healthy" profile with high scores in all facets of mindfulness and low scores on all facets of difficulties in emotion regulation. Approximately 33% students were classified into the "observant yet judgmental" profile, where scores on observing was the highest and nonjudging of inner experience was the lowest among the three profiles. Lastly, approximately 9% of students were classified into the "unhealthy without strategies" profile with greatest difficulties in most emotion regulation dimensions and generally low mindfulness scores. This group had limited access to emotion regulation strategies, and were not readily capable of noticing their inner experiences.

Unlike previous studies where a four-class solution was found in profiles of mindfulness among college students, ^{25,26} the three-class emerged as the best representation of the data. Specifically, one profile emerged as the "healthy" profile, largely corresponding to the "high mindfulness" profile from these two previous studies. The "observant yet judgmental" profile mirrors the characteristic of the "judgmentally observing" profile. The "unhealthy without strategies" profile is one that is distinguishable from previous studies. This profile did show low levels of observing, but a notably distinct high scores on limited access to emotion regulation strategies. Thus, for this profile, priority should be given to developing access to and cultivating concrete emotion regulation strategies, while also focusing on increasing one's observing capacity. Had only the mindfulness score been used to identify subgroups, the need to emphasize building access to emotion regulation strategies would have been neglected.

Each profile showed different levels of the WFSC. Students in the "healthy" profile reported the lowest levels of WFSC. This result is in line with literature that evidences the protective role of mindfulness in work-related outcomes. Particularly, studies highlight the protective role of mindfulness in WFC³⁸ as well as the protective role of emotion regulation in work-related well-being. High mindfulness and better emotion regulation capacity allows individuals to not only be attuned to conflicts when they arise, but also provides clarity in interpreting the nature of the conflict. It also allows one to address conflict resolution with intention and agency.

Students in the "healthy" profile showed significantly lower levels of WSFC in all facets compared to the "observant yet judgmental" profile, a profile that is characterized by being able to observe inner experiences, but doing so in a judgmental fashion. Thus, the role of healthy emotion regulation might be out of place for this "observant yet judgmental" profile, when compared to the "healthy" profile. The comparison between students in the "healthy" profile and "unhealthy without strategies" profile warrant a closer examination. Specifically, the "healthy" profile showed significantly lower levels on all behavioral-based WFSC in any direction compared to the "unhealthy without strategies" profile. Given that the difference between these two profiles can be marked by the presence or absence of access to emotion regulation strategies, this result indicates that having access to emotion regulation strategies is beneficial in dealing with behavioral-based conflict in multiple role management. In other words, the "healthy" profile was better capable of transferring a learned adaptive behavior from one domain to another. Conversely, when one does not know how to deal with triggered emotions (e.g., emotions are perceived as overwhelming, an upsetting situation is believed to be long-lasting without much hope for change), this might interfere with believing in one's capability in transferring a behavior

that is adaptive in one domain to another. On the other hand, both the "healthy" and "unhealthy without strategies" profiles seem to struggle with managing time effectively to handle responsibilities in multiple domains, as evidenced by non-significant differences in most time-based conflict measures.

In comparing levels of WFSC between "observant yet judgmental" and "unhealthy without strategies" profile, there were no significant differences in 11 of 12 domains (except FS time). Students in the "observant yet judgmental" profile are highly observant, but also may over-report the levels of perceived conflict that arise when they manage different roles in their lives. Perhaps the degree of students' perception of time-based conflict in family and school may be a function of their highly observant and judgmental tendencies rather than having a lack of access to emotion regulation strategies. That is, family to school transition might be a particularly difficult shift for first year college students who are harshly fixated on internal experiences, only to be exacerbated by the fact that time is perceived to be limited. On the other hand, those who are in the "unhealthy without strategy" profile may lack proper strategies to regulate their emotions, but because they are also less observant and also less judgmental, they may experience less family-school interference in time.

Overall, our findings are consistent with the limited literature that has assessed mindfulness and difficulties in emotional regulation as it relates to WFSC. More importantly, our study is an initial report on how different combinations of mindfulness and emotion regulation relate to WFSC.

Implications for College Health

Findings of this study have important implications for college students' health. First, our study highlights that while every student is different, students can also be characterized into

groups using criteria that is relevant for their psychosocial development. Characterization of students according to their emotion regulation tendencies is developmentally appropriate and relevant method because first year of college is a time of emotional turbulence and personal growth. Understanding different underlying subgroup will be helpful in early-detection and individualization for an intervention with at-risk students. Further, understanding heterogeneity provides a realistic allocation of attention and resources to students who manifest unstable emotion regulation patterns and hence are likely to be more at risk for subsequent mental and physical health issues.

Related and second, this study demonstrates how mindfulness and emotion regulation are linked to one's WFSC levels. Research suggests that WFSC is linked to deleterious physical and psychological health outcomes. 40,41 Thus, high WFSC might be one of many concurrent signs that reflect poor student functioning. Because roles that students take in work, family, and school are natural and expected roles that they fulfill, students might be more open and less self-stigmatizing in disclosing difficulties with WFSC. Using this information as a way to gauge students' physical and psychological health can be useful.

Lastly, college student WFSC has been neglected within the larger college health literature despite its relevance and importance, but our findings highlight that exploring individual difference factors that predict WFSC should be of important concern. This is because successful management of WFSC that is learned and practiced can be extended to working adult life as students transition to workforce.⁴² Successful management of WFSC is an essential life skill to master and yet prevention or intervention programming geared towards addressing and managing WFSC is scarce. Findings from this study suggest that prioritizing students who

judgmentally observe their emotions and do not have effective strategies to deal emotions for career intervention is an initial step to producing a healthy workforce.

Limitations and Future Directions

This study has several limitations. First, we used cross-sectional data and thus causality cannot be inferred. Future studies can explore whether profiles of theoretically plausible antecedents distally predict WFSC using a longitudinal design. Second, results from LPA analysis may not be generalizable. This limitation of generalizability is due to class membership being assigned based on probabilities. However, LPA provides a rich picture of heterogeneity within samples, compared to using two-way or three-way interaction regression models. That is, regression models necessitate delineating high/low scores on a variable for interpretation, but LPA allows to show both high and low scores on a variable at the same time, particularly suited when there are many subdimensions in a given variable. Future studies could explore whether the same number of latent profiles emerge when using both mindfulness and difficulties in emotion regulation.

Despite these limitations, this study lays a foundation to address similar questions on how young adults with different levels of dispositional mindfulness and difficulties in emotional regulation experience conflicts among work, family, and school. Particularly, perceived limited time seems to be an important source of conflict for first year college students.

Reference

- 1. Amstad FT, Meier LL, Fasel U, Elfering A, Semmer NK. A meta-analysis of work—family conflict and various outcomes with a special emphasis on cross-domain versus matching-domain relations. *J Occup Health Psych.* 2011;16(2):151-169.
- 2. Frone MR, Russell M, Cooper ML. Antecedents and outcomes of work-family conflict: Testing a model of the work-family interface. *J Appl Psychol*. 1992;77(1):65-78.
- 3. Olson KJ. Development and initial validation of a measure of work, family, and school conflict. *J Occup Health Psych*. 2014;19(1):46-59.
- 4. Kena G, Hussar W, McFarland J, et al. The Condition of Education 2016. NCES 2016-144. *NCES*. 2016.
- 5. Choo CEK, Kan ZX, Cho E. A Review of the Literature on the School-Work-Life Interface. *J Career Dev.* 2019:0894845319841170.
- 6. Lederer AM, Autry DM, Day CR, Oswalt SB. The impact of work and volunteer hours on the health of undergraduate students. *J Am Coll Health*. 2015;63(6):403-408.
- 7. Bahrassa NF, Syed M, Su J, Lee RM. Family conflict and academic performance of first-vear Asian American undergraduates. *Cult Divers Ethn Min.* 2011;17(4):415-426.
- 8. Oviatt DP, Baumann MR, Bennett JM, Garza RT. Undesirable effects of working while in college: work-school conflict, substance use, and health. *The Journal of Psychology*. 2017;151(5):433-452.
- 9. Eby LT, Casper WJ, Lockwood A, Bordeaux C, Brinley A. Work and family research in IO/OB: Content analysis and review of the literature (1980–2002). *J Vocat Behav*. 2005;66(1):124-197.
- 10. Michel JS, Clark MA. Has it been affect all along? A test of work-to-family and family-to-work models of conflict, enrichment, and satisfaction. *Pers Indiv Differ*. 2009;47(3):163-168.
- 11. Kabat-Zinn J. Mindfulness-based interventions in context: Past, present, and future. *Clin Psychol-Sci Pr.* 2003;10(2):144-156.
- 12. Baer RA, Smith GT, Hopkins J, Krietemeyer J, Toney L. Using self-report assessment methods to explore facets of mindfulness. *Assessment*. 2006;13(1):27-45.
- 13. Gratz KL, Roemer L. Multidimensional assessment of emotion regulation and dysregulation: Development, factor structure, and initial validation of the difficulties in emotion regulation scale. *J Psychopathol Behav.* 2004;26(1):41-54.
- 14. Allen TD, Kiburz KM. Trait mindfulness and work–family balance among working parents: The mediating effects of vitality and sleep quality. *J Vocat Behav*. 2012;80(2):372-379.
- 15. Tomlinson ER, Yousaf O, Vittersø AD, Jones L. Dispositional mindfulness and psychological health: A systematic review. *Mindfulness*. 2018;9(1):23-43.
- 16. Hill CL, Updegraff JA. Mindfulness and its relationship to emotional regulation. *Emotion*. 2012;12(1):81-90.
- 17. Pepping CA, O'Donovan A, Davis PJ. The differential relationship between mindfulness and attachment in experienced and inexperienced meditators. *Mindfulness*. 2014:5(4):392-399.
- 18. Dixon HC, Overall NC. Dispositional mindfulness attenuates the link between daily stress and depressed mood. *J Soc Clin Psychol*. 2016;35(3):255-268.

- 19. Brewer SK, Zahniser E, Conley CS. Longitudinal impacts of emotion regulation on emerging adults: Variable-and person-centered approaches. *J Appl Dev Psychol*. 2016;47:1-12.
- 20. Zimmerman P, Iwanski A. Emotion regulation from adolescence to emerging adulthood and middle adulthood: age diferences, gender diferences and emotionspecific development variations. In: SAGE publications; 2014.
- 21. Park CL, Edmondson D, Lee J. Development of self-regulation abilities as predictors of psychological adjustment across the first year of college. *J Adult Dev.* 2012;19(1):40-49.
- 22. Dvořáková K, Kishida M, Li J, et al. Promoting healthy transition to college through mindfulness training with first-year college students: Pilot randomized controlled trial. *J Am Coll Health*. 2017;65(4):259-267.
- 23. Brady ST, Hard BM, Gross JJ. Reappraising test anxiety increases academic performance of first-year college students. *J Educ Psychol*. 2018;110(3):395-406.
- 24. Edwards JR, Rothbard NP. Mechanisms linking work and family: Clarifying the relationship between work and family constructs. *Acad Manage Rev.* 2000;25(1):178-199.
- 25. Bravo AJ, Boothe LG, Pearson MR. Getting personal with mindfulness: A latent profile analysis of mindfulness and psychological outcomes. *Mindfulness*. 2016;7(2):420-432.
- 26. Pearson MR, Lawless AK, Brown DB, Bravo AJ. Mindfulness and emotional outcomes: Identifying subgroups of college students using latent profile analysis. *Pers Indiv Differ*. 2015;76:33-38.
- 27. Van Eck K, Warren P, Flory K. A variable-centered and person-centered evaluation of emotion regulation and distress tolerance: Links to emotional and behavioral concerns. *J Youth Adolescence*. 2017;46(1):136-150.
- 28. Muthén LK, Muthen B. *Mplus user's guide: Statistical analysis with latent variables, user's guide.* Muthén & Muthén; 2017.
- 29. Nylund KL, Asparouhov T, Muthén BO. Deciding on the number of classes in latent class analysis and growth mixture modeling: A Monte Carlo simulation study. *Struct Equ Modeling*. 2007;14(4):535-569.
- 30. Bauer DJ, Curran PJ. Distributional assumptions of growth mixture models: implications for overextraction of latent trajectory classes. *Psychol Methods*. 2003;8(3):338-363.
- 31. Schwarz G. Estimating the dimension of a model. *The Annals of Statistics*. 1978;6(2):461-464.
- 32. Sclove SL. Application of model-selection criteria to some problems in multivariate analysis. *Psychometrika*. 1987;52(3):333-343.
- 33. Lo Y, Mendell NR, Rubin DB. Testing the number of components in a normal mixture. *Biometrika*. 2001;88(3):767-778.
- 34. McLachlan G, Peel D. Finite mixture models. John Wiley & Sons; 2004.
- 35. Jung T, Wickrama K. An introduction to latent class growth analysis and growth mixture modeling. *Soc Pers Psychol Compass.* 2008;2(1):302-317.
- 36. Muthén B. Diversing LMR and BLRT p-values (Msg 2). In:2009.
- 37. Asparouhov T, Muthén B. Auxiliary variables in mixture modeling: Using the BCH method in Mplus to estimate a distal outcome model and an arbitrary secondary model. *Mplus Web Notes*. 2014;21(2):1-22.
- 38. Zivnuska S, Kacmar KM, Ferguson M, Carlson DS. Mindfulness at work: Resource accumulation, well-being, and attitudes. *Career Dev Int.* 2016;21(2):106-124.

- 39. Buruck G, Dörfel D, Kugler J, Brom SS. Enhancing well-being at work: The role of emotion regulation skills as personal resources. *J Occup Health Psych*. 2016;21(4):480-493.
- 40. Adams GA, King LA, King DW. Relationships of job and family involvement, family social support, and work–family conflict with job and life satisfaction. *J Appl Psychol*. 1996;81(4):411-420.
- 41. Hannum JW, Dvorak DM. Effects of family conflict, divorce, and attachment patterns on the psychological distress and social adjustment of college freshmen. *J Coll Student Dev.* 2004;45(1):27-42.
- 42. Loughlin C, Barling J. Young workers' work values, attitudes, and behaviours. *J Occup Organ Psych.* 2001;74(4):543-558.

Table 1. Descriptive Statistics of Difficulties in Emotion Regulation and Mindfulness (n = 194)

	Mean S	SD	1	2	3	4	5	6	7	8	9	10	11
1. Non-acceptance of emotional responses	12.55 5	5.50	.89										
2. Difficulty in goal directed behaviors	14.24 5	5.17	.37**	<u>.88</u>									
3. Impulse control difficulties	10.93 4	1.55	.40**	.48**	<u>.85</u>								
4. Lack of emotional awareness	15.10 5	5.10	00	17*	02	<u>.86</u>							
5. Limited access to regulation strategies	16.12 6	5.49	.55**	.55**	.59**	.08	<u>.89</u>						
6. Lack of emotional clarity	10.83 3	3.53	.43**	.28**	.29**	.33**	.48**	<u>.80</u>					
7. Observing	25.01 6	5.11	.14	.04	05	39**	01	11	<u>.81</u>				
8. Describing	25.76 6	5.37	17*	13	12	41**	20**	54**	.19**	<u>.87</u>			
9. Acting with Awareness	25.61 6	5.29	37**	42**	28**	03	38**	30**	14	.23**	<u>.89</u>		
10. Non-judging	27.12 6	5.16	53**	29**	20**	.06	42**	25**	40**	.14*	.41**	<u>.86</u>	
11. Non-reacting	20.37 4	1.63	.02	18*	25**	34**	17*	18**	.50**	.31**	07	25**	<u>.79</u>

Note. **p < .01, *p < .05. Cronbach's alphas are underlined and shown on the diagonal.

PROFILES AND WORK-FAMILY-SCHOOL

Table 2. Fit indices for one- to five-class models

Class	Class	Count	Proportion	BIC	aBIC	Entropy	LMR	p	BLRT	p
One-class				13391.83	13322.14					
Two-class	1	120	.62	13118.58	13010.87	0.862	331.29	0.0044	336.53	<.0001
	2	75	.38							
Three-class	1	66	.34	13048.69	12902.97	0.904	131.09	0.0890	133.16	<.0001
	2	112	.57							
	3	17	.09							
Four-class	1	44	.23	13006.31	12,822.58	0.857	104.02	0.1537	105.66	<.0001
	2	65	.33							
	3	69	.35							
	4	17	.09							
Five-class	1	14	.07	13007.37	12785.62	0.851	61.248	0.3431	62.216	<.0001
	2	66	.34							
	3	44	.23							
	4	54	.28							
	5	17	.09							

Note. Proportions do not always sum to 1.0 because of rounding. BIC = Bayesian information criterion; aBIC = sample-adjusted BIC; LMR = Lo-Mendell-Rubin test; BLRT = bootstrap likelihood ratio test.

Table 3. Latent profile means, standard deviations, and Wald chi-square tests of mean equality

	`	P1 (Observant P2 (Healthy) yet judgmental)		P3 (Unhealthy without strategies)		Global χ²	P1 vs. P2	P2 vs. P3	P1 vs. P3	
Auxiliary Variable	\overline{M}	SE	M	SE	M	SE	_			
W-S strain	11.22	0.587	7.775	0.429	9.983	0.892	21.64***	20.39***	4.99	1.31
W-S time	10.86	0.579	7.83	0.474	9.04	0.935	14.676**	14.67 ***	1.35	2.64
W-S behavior	9.772	0.463	6.495	0.372	8.817	0.683	27.909***	25.688***	8.952**	1.288
S-W strain	11.891	0.595	7.693	0.420	10.041	0.852	29.30***	27.81***	6.16*	2.96
S-W time	11.301	0.566	7.580	0.425	9.576	0.868	24.520***	23.890***	4.279	2.662
S-W behavior	9.306	0.450	6.601	0.387	9.116	0.737	19.70***	16.420***	9.189**	0.046
F-S strain	9.967	0.622	6.625	0.437	10.770	1.076	23.68***	16.15***	12.80***	0.403
F-S time	9.599	0.627	5.159	0.418	7.162	0.621	28.80***	28.18***	7.20**	7.44**
F-S behavior	9.677	0.487	6.963	0.388	11.136	1.002	25.97***	16.41***	15.17***	1.66
S-F strain	11.632	0.626	8.383	0.441	11.644	1.212	19.76***	16.46***	6.40*	0.00
S-F time	12.39	0.613	9.393	0.491	11.851	1.262	14.33**	13.14***	3.31	0.14
S-F behavior	10.024	0.546	6.755	0.369	10.715	1.042	30.12***	22.17***	12.88***	0.33

Note. The significance level was Bonferroni corrected within each variable (0.05/3) and set to .016. *** p < .001, ** p < .01, *p = .01 .016.

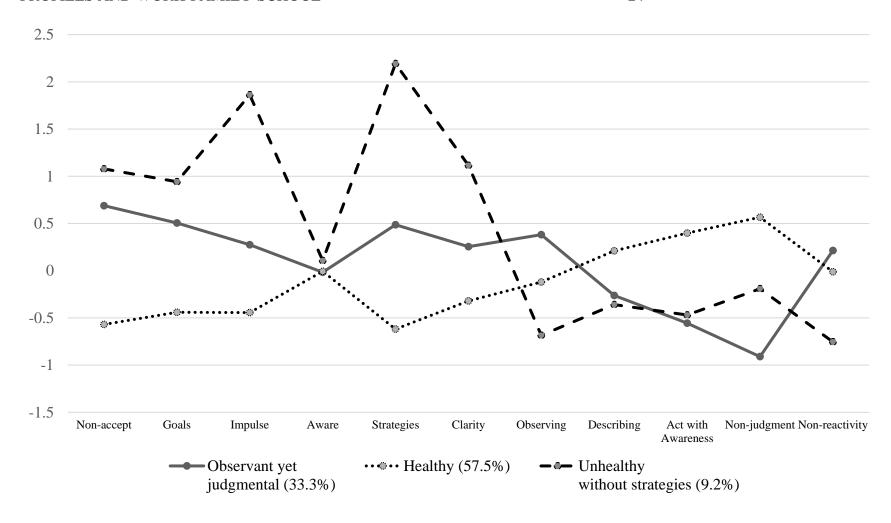


Figure 1. Plot of the standardized mean scores of difficulties in emotion regulation and mindfulness facets