

Impact of an Online Mindfulness Training Program on Teacher's Mood and Possible Self

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ABSTRACT

The purpose of this study is to assess the impact of a 16-week online mindfulness training program on teacher's feelings of burnout, fear of COVID-19, levels of mindfulness, and view of their possible selves. To determine the impact of this mindfulness program three variables will be measured for change. These variables will measure burnout, mindfulness, and fear of COVID-19. Possible self will be measured using an open ended possible self-questionnaire. It is hypothesized that participation in this online mindfulness training will result in a significant decrease in burnout and fear of COVID-19 and will demonstrate a positive impact on the teacher's possible self-view and increase their levels of mindfulness. Teachers' view of their possible selves was measured before and after the mindfulness training in order to assess the impact of mindfulness on possible self. The post test results showed significant improvements in the measure of teachers' ability to detach themselves from negative emotion. The teacher's view of possible self-showed no change. This indicates that online mindfulness training for teachers has a positive effect on their mood and a decrease in reactivity to negative emotion. It also indicates that the possible self-view of the teachers was not impacted by the intervention. These results demonstrate that online mindfulness training programs can have a positive impact on teacher's ability to deal with emotional variability and stress that can be a part of their occupation.

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Nilsson and Kazemi (2016) defined mindfulness as a “particular type of social practice that leads the practitioner to an ethically minded awareness, intentionally situated in the here and now”. This state of non-judgement allows for the individual to become aware of their inner processes and outward environment in a mindful manner (Hart et al. 2013). Research has shown that the practice of mindfulness promotes hedonic and eudemonic well-being including (Brown and Cordon, 2009). They describe hedonic well-being as increased pleasure and relief from pain. Brown et al. (2007) describes eudemonic well-being as a self-realized, meaningful, and fully functional life.

Grossman, Niemann, Schmidt, & Walach (2004) conducted a meta-analysis of the effectiveness of mindfulness-based stress reduction (MBSR) on reducing psychosomatic, physical, and psychiatric disorders. MBSR helped individuals reduce these ailments by assisting them to develop increased awareness of the present moment and the accompanying thoughts. The goal is to increase an individual's perception and improve feelings of vitality and ability to cope, leading to an improved affect. MBSR relies on the belief that most individuals are unaware of their present moment but have the ability to develop sustained awareness of the moment. This takes time and practice but creates a more vital experience of life as a conscious response to the moment replaces unconscious reactivity. This is a non-judgmental state which increases the truthful experience of the moment that, in turn, increases feelings of self-control. This study involved the analysis of 20 studies whose participants suffered from cancer,

fibromyalgia, coronary artery disease, chronic pain, depression, obesity, binge eating, psychiatric disorders, and stress. The results suggest that MBSR is an effective way to help a broad range of individuals coping with negative emotions and disorders (Grusman et al., 2004).

Galante, Bekkers, & Gallacher (2014) conducted a review and meta-analysis of the effect of kindness-based meditation (KBM) on feelings of health and well-being. KBM aims to help individuals be consciously kind to others. Loving-kindness meditation (LKM) is one of the most used techniques in KBM in which the individual is encouraged to develop feelings of loving acceptance to all humans. One does this by directing feelings of caring towards the self, towards loved ones, followed by acquaintances, strangers, individuals with whom one may have difficulty with, and lastly towards all humankind. LKM encourages the individual to repeat short phrases to oneself such as "I wish you joy and peace" or visualize light energy feelings of kindness towards others. Twenty-two studies (1747 participants) were reviewed to determine how KBM affects an individual's feelings of health and well-being. The results showed that KBM was effective at reducing self-reported feelings of depression and increasing feelings of mindfulness, compassion to self and others, general feelings of positive emotions, and decreased levels of stress (Galante et al., 2014).

Zarate et al., (2017) analyzed the effect of mindfulness on teacher well-being, specifically feelings of stress, burnout, depression, and anxiety. The authors examined articles that included 1001 educators as participants. Their findings showed large effects on increased feelings of mindfulness, moderate effects on decreases in stress and anxiety, and small effects on feelings of depression and burnout. Teachers experiencing negative emotions in the classroom has also been shown to affect the academic and emotional experience of their students (Zarate et al.,

2017). Gouda et al., (2016) showed that both students and teachers benefitted from taking a Mindfulness-Based Stress Reduction (MBSR) school-based intervention. Specifically, students showed significant improvements in self-regulation, stress, school-specific self-efficacy, and interpersonal problems. Teachers results indicated significantly higher levels of mindfulness and reduced interpersonal problems.

A study by Evans and Russell in 2019 discusses the increased need for teachers to learn how to teach controversial issues through a trauma informed lens through the use of social emotional learning (SEL) and mindfulness meditation (MM). They discuss how helping students move beyond a “triggered” state requires the learning of emotional self-regulation. They argue that teaching students SEL and MM strategies allow them to learn without being distracted by emotional triggers that can occur when they don't have emotional self-regulation skills. These are tools that allow students to calm their emotional responses and help them to understand their own attitudes and beliefs (Evans & Russell, 2019). A program that uses SEL and MM is Mindfulness First. This is the program that the school chose to use in order to help address the impact of trauma in the classroom.

Mindfulness First is an online program focused on teaching skills to both teachers and students to increase ability to focus and concentrate to increase stress management and emotional regulation skills. The program also seeks to increase positive outlook, emotional well-being while creating school settings with a safer, less stressful, and more positive environment for both staff and students. Mindfulness First teaches participants exercises designed to foster awareness of emotions, thoughts, senses, and impulses in order to increase emotional resilience and

mindfulness. This study hopes to address the questions as to how the practice of mindfulness impacts teacher burnout, possible-self view, fear of COVID-19, and levels of mindfulness.

Burnout

Teacher burnout has a huge impact on the field of education. Pirelli, Formon, and Maloney (2020) discuss how burnout can be the result of continual exposure to work stress and has the repercussions of decreased level of engagement in an individual's work duties (Pirelli et al., 2020). Pirelli et al. (2020) also found that constant exposure to work stress and repeated empathizing with an individual's suffering led to burnout and compassion fatigue. Butler et al. (2017) showed that increased age, low self-care expenditure, and higher levels of job stress were positively correlated with compassion fatigue and burnout. They also found that greater levels of self-care efforts were positively correlated with lower levels of burnout and compassion fatigue. The definition of burnout provided by Henson (2020, p.81) will be utilized for this study as "... an accumulation of stress related to the work environment...". The attributes associated with this definition of burnout include emotional exhaustion, cynicism, hopelessness, and an impaired ability to perform and complete work tasks (Henson, 2020).

The impact of mindfulness on burnout is one that has been looked at fairly extensively. Goodman & Schorling (2012) showed that a mindfulness course can decrease feelings of burnout and improve feelings of well-being among healthcare providers. Like teachers, healthcare providers are under ever increasing levels of stress that can lead to feelings of burnout due to work stress. The study involved 93 healthcare workers and included physicians, psychologists, nurses, and social workers. These participants met for 2.5 hours a week for 8 weeks to learn mindfulness-based stress reduction, and at the conclusion attended a 7-hour retreat. This course

utilized teachings of mindful movement, walking, and sitting meditation, body scan, as well as mindfulness practices. The subjects reported improved feelings of depersonalization, emotional exhaustion, personal accomplishment, and mental well-being (Goodman & Schorling, 2012). Turgoose and Maddox (2017) research on mindfulness found a strong relationship between burnout and compassion fatigue with mindfulness being a strong protective factor against both.

Becker et al (2014) showed that teacher's feelings within the classroom are contagious, if the teacher feels high levels of burnout, their students are likely to experience those emotions as well, which can have a negative impact on their academic performance. As Herman et al. (2017) showed, teacher stress and burnout are common, and can undermine their physical health and emotional well-being. These teacher health problems can cause an increase in the costs associated with teacher illness, absenteeism, and attrition from the profession. This also may adversely affect student engagement and learning through increased negative emotions, teacher absenteeism, and decreased teaching effectiveness (Briner & Dewberry, 2007; Jennings & Greenberg, 2009). Currently, many schools do not help teachers address the stressful nature of their vocation by providing training such as mindful emotion regulation (Roeser, Skinner, et al., 2012). However, I hypothesize that it is these kinds of training that are needed for educators to effectively manage negative emotions that are inherent within high-stress professions such as teaching. This, in turn, creates a more positive atmosphere for the student while decreasing costs for the schools and lowering levels of absenteeism and attrition rates in schools. Burnout is not the only issue facing teachers today. As can be seen by the recent pandemic of COVID-19, teachers are placed in a precarious position when faced with a pandemic illness that has shown to impact both the emotional and physical health of individuals.

Fear of COVID-19

The effect that mindfulness has on the experience of fear of COVID-19 is a new topic of research. COVID-19 is a virus that was unknown and therefore unpredictable. The rapid spread of this worldwide virus brought financial and economic instability as well as anxiety about the health of the individual as well as those around them (Duby et al., 2020). Fitzpatrick, Harris, & Drawve (2020) researched how fear of COVID-19 is spreading in the United States. They found that respondents average almost 7 on a scale of 10 when surveyed as to their level of fear of COVID-19. Also found were bivariate relationships between fear and anxiety and depressive symptoms. The researchers discuss the need for more research on the potential mental health risk the fear of COVID-19 poses, as well as mental health interventions that might be beneficial (Fitzpatrick et al., 2020).

Ornell, Shuch, Sordi, and Kessler (2020) discuss how the psychiatric and psychological impact of global pandemics are studied secondary to the biological impact to humans. They discuss how fear is a natural human emotion that is fundamental to human survival which if experienced chronically or disproportionately can develop into various psychiatric disorders. In times of a pandemic, fear increases anxiety and stress in normal populations and intensifies these feelings in populations already experiencing psychiatric disorders. History shows that the mental implications of the fear of pandemics can outlive the pandemic itself. (Reardon, 2015). The high economic impact of mental disorders combined with the psychosocial impact of pandemics can be great. This lends to the question of what mental health treatment strategies can be protective against the mental health impact of living through a pandemic (Ornell, Shuch, Sordi & Kessler, 2020).

Shigemura, Ursano, Morganstein, Kurosawa & Benedek (2020) showed that individuals infected (or who suspected they were infected) with COVID-19 can experience severe and intense emotional reactions related to the infection. These emotions can include fear, boredom, anxiety, loneliness and/or anger. These emotions can evolve into mental disorders including depression, anxiety, PTSD, psychosis, paranoia, and can even lead to suicide. It has been shown that these negative emotions related to pandemic fear are higher in quarantined individuals. This can lead to an increased strain on emergency health services. These researchers also discuss the need for strategies that can help mitigate the negative emotional toll of a pandemic for the general population as well as specific groups of individuals with mood disorders, as well as to address the mental health needs of the providers of care to these individuals (Shigemura et al., 2020). Previous studies of COVID-19 among health care providers show they have high rates of anxiety, stress, mental disorders, and PTSD, especially among nurses and doctors (Kang, Li, Hu, Chen & Yang, 2020, and Huang, Han, Luo, Ren, & Zhou, 2020).

No universal protocols or guidelines have been established that address the most effective psychosocial support during times of emergencies or pandemics (Dietlens, Moonens, Van Praet, De Buck & Vandekerckhove, 2014). It is unknown if there are any preventative strategies or actions an individual can take to mitigate the psychosocial impact of a pandemic. Tucci, Moukaddam, Meadow, Shah, Galwankar, & Kapur (2017) discuss the need for increased investment in research and effective mental health strategies when dealing with the mental health consequences of infectious outbreaks. This combined with data collected by the World Health Organization (2018) that demonstrates the main causes of mortality and morbidity in the world are directly related to psychological factors demonstrates the need to increase understanding of

the protective factors for mental health. Dubey et al. (2020) discuss the urgent need to develop plans for psychosocial preparedness for future pandemics and the lack of current models in order to lessen the negative psychosocial impact of pandemics. Little research has been done to evaluate the effect of mindfulness on fear during a pandemic. Given that a large part of mindfulness is learning to become aware of your thoughts, and the current mindfulness program being studied encourages a shift to more positive emotions, it is believed that taking part in this mindfulness study will result in less fear of the COVID-19 pandemic. Also, given that the mindfulness program is provided online, it is a possible tool in the times of a pandemic that requires social distancing that can be learned without having to leave one's home. Not only does this study hope to shed light on how mindfulness impacts COVID-19, but it also seeks to determine the impact on teachers' view of themselves as a teacher.

Possible Self

Teacher's possible self-view has been studied fairly extensively. According to Lee & Schallert (2016), preservice teachers had a view of themselves as teachers and learners before entering school to get a teaching degree, and these views influenced how they conceived of teaching. This self-concept as a teacher tends to shift in the moment, being influenced by their environment and what it is occurring. Specifically, teachers report going from feeling like students to feeling like teachers depending on circumstances. The individuals in this study reported using their past learning experiences in the present to shape and evaluate their current view of themselves as a teacher. The researchers found that the teachers' view of themselves combined with their perspectives on what it means to be a teacher grow and influence each other

to form their self-identity as a teacher. In sum, in learning to become a teacher and forming that identification as a teacher, individuals go through three processes. These include reflection, identification, and projection. Namely, teachers utilize their past experiences, which are modified by the immediate environment, and this works together to form a projection of their possible future self as a teacher (Lee & Schallert, 2016). Keeping this development of teaching possible self in mind, the question arises as to what may have a positive impact on this development of self.

Hong and Greene (2011) studied how the possible selves of future science teachers affected their attrition rates as teachers. They looked at how the hopes and fears of these science teachers combined with their experiences to form their possible view of self. Their findings showed six categories of possible future self with the most common category encasing effective/ineffective science teaching. The researchers found that when the teachers hoped for self was not balanced with their feared self, the teachers had more fears regarding their effectiveness as future teachers. These hopes and fears were mostly affected by the teachers' experiences in the past related to teaching and learning. Mainly, the effectiveness of the teacher's education program played a large role in forming the teacher's self-perception as an effective or ineffective teacher (Hong & Greene, 2011).

Hamman, Coward, Johnson, Lambert, Zhou, & Indiatsi (2013) looked at how a new teacher's possible professional self is affected by thoughts of their future self as a teacher. They found that a teacher's possible self was changed, in a fairly short period of time, by mentors, reflection, and experiences. These outside influences that can affect a teacher's future possible

self were found to occur in three different ways. One, in which the teachers did not exhibit outward changes, was to strengthen the teacher's existing possible self. Those teachers who showed slight changes in outward behaviors seemed to assimilate change into their future possible self-view as a teacher. The teachers that showed the most assimilated changes into their future possible self did so by synthesizing what they learned during their teaching practicum into their future self-view (Hammon et al., 2013). The question then arises as to how mindfulness, as an outside experience, can affect a teacher's possible future self and affect their mood and stress level as a practicing teacher. What is little known or researched is the impact of mindfulness on possible self and how this may impact the development of this self-concept.

The purpose of this study is to assess the impact of a 16-week online mindfulness training program on teacher's feelings of burnout, level of mindfulness, fear of COVID-19, and view of their possible selves. In order to determine the impact of this mindfulness program three variables will be measured for change. These variables include mindfulness, burnout, and fear of COVID-19. Possible self will be measured using an open ended possible self-questionnaire developed by Susan Oyserman (2004). It is hypothesized that participation in this online mindfulness training will result in a significant decrease in burnout and fear of COVID-19, increases in mindfulness and positive change in teacher's possible self-view.

Method

Participants

The participants in the study included 37 teachers and staff members of a small urban elementary school. Ages ranged from 22 to 61. Ethnic background was 82% White, Non-Hispanic, 11% Hispanic, 5 % American Indian, and 2% identified as a non-identified

ethnicity. 86% were female and 14% were male. Participants ranged in educational attainment from associates degree (1%), bachelor's degree (47%) to master's degree (52%).

Procedure

The participants in the study were administered a survey through a secure online format, Qualtrics. It took approximately 20 minutes to complete the survey. Participants were asked to consent to participate in a study concerning the impact of mindfulness training on possible selves, fear of COVID-19, level of mindfulness and feelings of burnout. If they did not provide consent they were not allowed to complete the survey. The survey collected basic demographic information and took approximately 20 minutes to complete. At the end of the survey the participants were given information on how to contact mental health providers should they have experienced any emotional discomfort. The participants completed the survey at the beginning and ending of the online mindfulness training.

After the pre and post data was collected, it was transferred into an Excel spreadsheet and then analyzed for validity using SPSS. The data and Excel spreadsheet were stored on an encrypted flash drive protected by a strong password known only to the researcher. The data was entered anonymously.

Measures

Burnout was measured using the Maslach Burnout Inventory Educators' Survey (Maslach et al., 1996; Sirigatti & Stefanile, 1993). This questionnaire consists of 22 items assessed on three scales: depersonalization (negative, distancing attitudes towards students), emotional exhaustion (drying up of emotional energies), and lack of personal accomplishment from the job.

Decreased scores on personal accomplishment and increased scores on depersonalization and emotional exhaustion and indicate a higher degree of burnout. The emotional exhaustion subscale is most indicative of burnout. Participants indicate the amount of time they felt a certain way in consideration of their job. This survey uses a 7-point Likert scale with 0= never and 6=daily. Cronbach's alphas range from .63 to .86 (Sirigatti & Stefanlie, 1992, 1993). In this study the Cronbach's alphas ranged from .443 to .904.

In order to determine the impact of mindfulness on this pandemic fear, the Fear of COVID-19 Scale (Ahorsu et al., 2020) was given to teachers to measure the degrees of anxiety they were experiencing that was associated with COVID-19. The measure specifically aims to assess the level of fear that an individual feels that COVID-19 poses to their personal health on a 5-point Likert scale that ranges from "strongly agree" to "strongly disagree". Higher scores are associated with higher levels of fear of COVID-19. The validity and reliability of this scale was measured by Ahorsu et al. (2020) and was found to have good internal consistency ($\alpha = .82$) and test-retest reliability ($ICC = .72$). Concurrent validity was established with the Perceived Vulnerability to Disease Scale, particularly with the factor's germ aversion ($r = .459$) and perceived infectability ($r = .483$). Concurrent validity was also found with the factors of anxiety ($r = .511$) and depression ($r = .425$) within the Hospital Anxiety and Depression Scale. Summing the scores on all seven items gave a full score utilized for the analysis.

Possible self was measured using The Possible Selves Questionnaire developed by Susan Oyserman (2004). This questionnaire uses open-ended possible self and strategies questions, which the participant can write in in four expected and four feared possible selves. Participants then may write in strategies for each possible self-response (Oyserman et al., 2004). I counted

and content coded responses using the coding scheme created by Oyserman (Oyserman et al., 2004).

Dispositional mindfulness was measured using the Five Facet Mindfulness Questionnaire (FFMQ; Baer et al., Giovannini et al., 2014). This measure uses five subscales that reflect five different facets of mindfulness including observing (obs), describing (des), acting with awareness (act), nonjudgement of inner experience (nonjud) and nonreactivity (nonrea) to inner experience. Participants answer on a 5-point Likert scale (1= never or very rarely true, 5= very often or always true). Good reliability was found with Cronbach's $\alpha = .86$ for the total score and $\alpha > .74$ for subscales (Giovannini et al., 2014).

Mindfulness First is an online mindfulness training program for teachers that utilized trauma-informed Mindfulness Based Social and Emotional Learning (MBSEL). The teachers were guided by a Mindfulness First Instructor who guided them through learning mindfulness skills that can be applied both to themselves and their students. This curriculum was taught over a 16-week period in which mindfulness skills were taught using recorded lessons and written curriculum resources that were made available weekly and are available for review at later times. The Curriculum Training Lessons took 15-35 minutes per week and additional time was provided for discussions between the participants and instructor.

Statistical Analysis

To assess how mindfulness affected fear of COVID-19, possible self, levels of mindfulness and burnout, a comparison was done of scores in a single sample, pre-test/post-test design after the implementation of a 16-week mindfulness intervention was completed by teaching staff. 37 participants completed the online pre-survey, and 16 participants completed

the post-survey. The pre and post intervention scores were compared using a paired samples t-test with IBM SPSS Statistics. In order to control for the multiple tests utilized, and minimize the potential of a type 1 error, the Holm-Bonferroni post-hoc test [[Holm, 1979](#)] was used for pre and post comparisons involving the total population.

Results

	Mean	Std Dev	S.E. Mean	Paired T Test		
				T Value	df	Adjusted p-value [^]
FFMQ						
Nonreact pre	2.98	.557	.14	-3.27	15	.050
Nonreact post	3.55	.608	.15			
Nonjudge pre	3.14	.626	.16	-2.75	15	ns*
Nonjudge post	3.54	.517	.13			
MBI						
EmotExh pre	4.13	1.18	.29	2.36	15	ns*
EmotExh post	3.59	1.10	.28			
Deperson pre	1.89	.759	.19	2.10	15	ns*
Deperson post	1.56	.512	.13			
Person Ach pre	5.65	.786	.20	-2.33	15	ns*
Person Ach post	6.12	.511	.13			
FCS						
Cv Fear pre	3.51	1.04	.28	2.58	13	ns*
Cv Fear post	2.96	1.09	.29			

TABLE 1 Paired samples t test results for pre- and post measures

[^]Holm-Bonferroni test

*significant to <0.05 without Holm-Bonferroni test

It was hypothesized that participation in this online mindfulness training would result in a significant decrease in burnout and fear of COVID-19 and would demonstrate a positive impact on the teacher's possible self-view. Levels of motivation were expected to increase at the completion of the intervention. A series of t-tests were employed to test for differences in faculty participants between the baseline and four months later. The Bonferroni-Holm approach was utilized to prevent type I error rate due to multiple comparisons. After a 4 months mindfulness intervention, paired t-test results for the 16 participants who completed the post test revealed that FFMQ nonreactive scores were significantly higher ($p = .05$) after the intervention.

Participants were questioned on their intention of using the mindfulness strategies for themselves and their students in the Qualtrics survey. 30% of respondents stated they strongly agreed that they planned on incorporating mindfulness into their classroom for themselves after

the training, 51% agreed they would, 11% were neutral, and 1% stated they did not plan on incorporating mindfulness. When asked if they planned on incorporating mindfulness into the classroom for their students, the responses were nearly the same with the difference of an individual who stated they disagreed to incorporating mindfulness for themselves changing to neutral when asked if they would incorporate it for their students. Participants were asked if the staff at the school treated each other with respect. 22% strongly agreed there was respect among staff, 72% agreed, 5% were neutral, and 1% disagreed. When asked about respect among students with each other, 3% reported strong agreement, 68% agreed, 20% reported neutrality, and 8% disagreed.

Discussion

The results of this study partially support the original hypothesis that mindfulness has a significant effect on participants' level of emotional exhaustion, depersonalization, feelings of accomplishment, nonreaction, nonjudgement, and fear of COVID-19. There was no change in teachers' view of their possible selves.

FFMIQ results indicated that the facet of mindfulness nonreactivity (nonrea) significantly increased. Non-reactivity involves detachment from negative emotions and thoughts by choosing to accept these thoughts with non-reaction. Non-reactivity has been shown to correlate with emotional resilience and mental balance (McManus et al., 2012). Benzo et al. (2018) showed that the development of the mindfulness skill of non-reactivity may be particularly associated with the beneficial effect of mindfulness to reduce stress in health care providers. These results held constant even after adjusted for the benefit on quality of life gained after a mindfulness training. This is important given that the teachers in this study reported significant

increases in their ability to deal with negative emotions in a non-reactive manner. It can be assumed that both healthcare professionals and teachers both experience significant levels of stress, and therefore the gaining of this skill is highly important when working in high stress vocations. It is also important given the fact that this survey was given in times of a pandemic, which can increase a teacher's feelings of negative reactivity.

These results are significant given the level of burnout and stress teachers report, with high numbers of them leaving the profession. These findings indicate that mindfulness could help to mitigate the feelings of burnout and stress that many teachers experience by helping them to cope by deciding to accept these emotions with non-reaction. In summary, these results indicate that the Mindfulness First 16-week online course may be beneficial for reducing the experience of negative emotions for teachers and staff.

Limitations

The primary limitation of the current study is the sample size and the small number of teachers who completed the post-survey (37 participants completed the pre-survey, and 16 participants completed the post). Also, the lack of a control group for comparison is significant limitation. The level of participant adherence to the mindfulness program is unknown which can impact the results. The majority of the participants identified as white, non-Hispanic which limits the population that these results can be applied to. Also, the participants did not complete the Fear of Covid survey prior to the start of the pandemic which therefore limits the ability to know the true impact that mindfulness had on the experience of the fear of COVID-19. It is unknown how outside factors such as increased knowledge of the treatment of COVID influenced teachers' fear of COVID which makes it difficult to determine whether it was the

program intervention that decreased teachers fear of COVID. Lastly, the long-term effects of this program on mindfulness are unknown given the single post-intervention measurement.

Conclusion

In conclusion, decreasing perceived stress is of vital importance for teachers who are subjected regularly to highly stressful and demanding work environments. Literature shows that mindfulness programs such as Mindfulness First are effective at lowering stress levels of participants. When considering the time constraints experienced by teachers, online mindfulness programs may be particularly beneficial to reach this population. A possible recommendation for future research would include increasing the power of this study by trying to ensure more participants answered the post survey, and increasing the numbers of participants in general. This could have increased the significant findings from this study. The results from this study indicate that Mindfulness First is an effective program to be able to effectively teach teachers how to increase levels of non-reactivity to inner experience and therefore lessen levels of stress and burnout.

References

- Baer, R. A., Carmody, J., and Hunsinger, M. (2012). "Weekly Change in Mindfulness and Perceived Stress in a Mindfulness-based Stress Reduction Program.(Author Abstract)(Report)." *Journal of Clinical Psychology* 68.7 (2012): 755. Web.
- Baer, R. A., Smith, G. T., Hopkins, J., Krietemeyer, J., Toney, L. (2006). Using self-report assessment methods to explore facets of mindfulness. *Assessment*, 13, 27–45.
- Becker, E. S., Goetz, T., Morger, V., & Ranellucci, J. (2014). The importance of teachers' emotions and instructional behavior for their students' emotions – An experience sampling analysis. *Teaching and Teacher Education*, 43, 15 – 26.
- Benzo, R., Paige, M. Anderson, C., Clark, M. (2018). Mindfulness for Healthcare Providers: The Role of Non-Reactivity in Reducing Stress, *EXPLORE*, 14, Issue 6, 2018.
- Briner, R., & Dewberry, C. (2007). *Staff wellbeing is key to school success*. Retrieved from <http://www.scribd.com/doc/34205400/Staff-wellbeing-is-key-to-school-success-Full-Report>.
- Brown, K., Warren, R., Ryan, M., and Creswell, J. (2007). "Addressing Fundamental Questions about Mindfulness." *Psychological Inquiry* 18.4 (2007): 272-81. Web.
- Brown, K., Ryan, R., and Creswell, J. (2007). "Mindfulness: Theoretical Foundations and Evidence for Its Salutary Effects." *Psychological Inquiry* 18.4 (2007): 211. Web.
- Butler, L., Carello, J. & Maguin, E. (2017). Trauma, stress, and self-care in clinical training:

- Predictors of burnout, decline in health status, secondary traumatic stress symptoms and compassion, satisfaction. *Psychological Trauma: Theory, Research, Practice and Policy*, 9(4), 416-424. Retrieved from <http://dx.doi.org/10.1037/tra0000187>.
- Center for Disease Control and Prevention. Mental health and coping during COVID-19. Atlanta: CDC; 2020.
- Dieltjens T, Moonens I, Van Praet K, De Buck E, Vandekerckhove P. (2014). A systematic literature search on psychological first aid: lack of evidence to develop guidelines. *PloS one*. 2014;9:e114714.
- Doug, H., Eugene, W., & Hansel B. (2013) What I expect and fear next year: measuring new teachers' possible selves, *Journal of Education for Teaching*, 39:2, 222-234, DOI: [10.1080/02607476.2013.765194](https://doi.org/10.1080/02607476.2013.765194)
- Dubey, S., Biswas, P., Ghosh, R., Chatterjee, S., Dubey, M. J., Chatterjee, S., Lahiri, D., & Lavie, C. J. (2020). Psychosocial impact of COVID-19. *Diabetes & metabolic syndrome*, 14(5), 779–788. Advance online publication. <https://doi.org/10.1016/j.dsx.2020.05.035>
- Eccles, J.S. (1983). Expectancies, values, and academic behaviors. J.T Spence (Ed.), *Achievement and achievement motives*, W.H. Freeman, San Francisco, CA (1983), pp. 75-146
- Evans, Kelsey, and William Russell. "Developing Mindful Citizens: a Commentary on Social Emotional Learning, Mindfulness and Citizenship Education." *Journal of Research in Innovative Teaching & Learning* 12.1 (2019): 13–15. Web.
- Fitzpatrick, K., Harris, C., and Drawve, G. (2020). "Fear of COVID-19 and the Mental Health Consequences in America." *Psychological Trauma: Theory, Research, Practice*,

and Policy 12.S1 (2020): S17-21. Web.

Galante, J., Galante, I., Bekkers, M-J., and Gallacher, J. (2014). "Effect of Kindness-Based Meditation on Health and Well-Being: A Systematic Review and Meta-Analysis." *Journal of Consulting and Clinical Psychology* 82.6 (2014): 1101-114. Web.

Garland, E., Farb, N., Goldin, P., and Fredrickson, B. (2015). "Mindfulness Broadens Awareness and Builds Eudaimonic Meaning: A Process Model of Mindful Positive Emotion Regulation." *Psychological Inquiry* 26.4 (2015): 293-314. Web.

Giovannini, C., Giromini, L., Bonalume, L., Tagini, A., Lang, M., Amadei, G. (2014). The Italian five facet mindfulness questionnaire: A contribution to its validity and reliability. *Journal of Psychopathology and Behavioral Assessment*, 36, 415–423.

Goodman, M., and Schorling, J. (2012). "A Mindfulness Course Decreases Burnout and Improves Well-Being among Healthcare Providers." *The International Journal of Psychiatry in Medicine* 43.2 (2012): 119-28. Web.

Gouda, S., Luong, M. T., Schmidt, S., & Bauer, J. (2016). Students and Teachers Benefit from Mindfulness-Based Stress Reduction in a School-Embedded Pilot Study. *Frontiers in psychology*, 7, 590. <https://doi.org/10.3389/fpsyg.2016.00590>

Grossman, P., Ludger N., Stefan S., and Harald W. (2004). "Mindfulness-based Stress Reduction and Health Benefits: A Meta-analysis." *Journal of Psychosomatic Research* 57.1 (2004): 35-43. Web.

Hamman, D., Coward, F., Johnson, L., Lambert, M., Li Zhou, and Indiatsi, J. (2013).

"Teacher Possible Selves: How Thinking about the Future Contributes to the Formation

- of Professional Identity." *Self and Identity* 12.3 (2013): 307-36. Web.
- Hart, R., Ivtzan, I., and Hart, D. (2013). "Mind the Gap in Mindfulness Research: A Comparative Account of the Leading Schools of Thought." 17.4 (2013): 453-466. Web.
- Henson, J.S. (2017). Burnout or compassion fatigue: a comparison of concepts. *MedSurg Nursing*, 29(2), 77-95. Retrieved from <https://search-ebcsohost-com.libauth.purdueglobal.edu/login.aspx?direct=true&db=rzh&AN=142593297&site=eds-live>.
- Herman, K., Hickmon-Rosa, J., & Reinke, W. (2017). Empirically Derived Profiles of Teacher Stress, Burnout, Self-Efficacy, and Coping and Associated Student Outcomes. *Journal of Positive Behavior Interventions*. 20.
- Hilpert, J. C., Husman, J., Stump, G. S., Kim, W., Chung, W., & Duggan, M. A. (2012). Examining students' future time perspective: Pathways to knowledge building. *Japanese Psychological Research*, 54, 229-240.
- Holm S. A simple sequentially rejective multiple test procedure. *Scandinavian Journal of Statistics*. 1979:65-70.
- Hong, J., and Greene, B. (2011). Hopes and Fears for Science Teaching: The Possible Selves of Preservice Teachers in a Science Education Program. *Journal of Science Teacher Education* 22.6 (2011): 491-512. Web.
- Huang JZ, Han MF, Luo TD, Ren AK, Zhou XP. (2020). Mental health survey of 230 medical staff in a tertiary infectious disease hospital for COVID-19. *Zhonghua Lao Dong Wei Sheng Zhi Ye Bing Za Zhi*. 2020;38:E001.
- Husman, J., Derryberry, W. P., Crowson, H. M., & Lomax, R. (2004). Instrumentality, task

- value, and intrinsic motivation: Making sense of their independent interdependence. *Contemporary Educational Psychology*, 29, 63–76.
- Ivtzan, I., Young, T., Martman, J., Jeffrey, A., Lomas, T., Hart, R., and Eiroá O. (2016). "Integrating Mindfulness into Positive Psychology: A Randomised Controlled Trial of an Online Positive Mindfulness Program." *Mindfulness* (2016): 1396-407. Web.
- Jennings, P. A., & Greenberg, M. (2009). The prosocial classroom: Teacher social and emotional competence in relation to child and class-room outcomes. *Review of Educational Research*, 79, 491–525. doi: 10.3102/003465430832569
- Kang L, Li Y, Hu S, Chen M, Yang C, Yang BX, et al. (2020). The mental health of medical workers in Wuhan, China dealing with the 2019 novel coronavirus. *Lancet Psychiatry*. 2020;7:e14.
- Lee, S., & Schallert, D.L. (2016). Becoming a teacher: Coordinating past, present, and future selves with perspectival understandings about teaching. *Teaching and Teacher Education*, 56 (2016), pp. 72-83
- Levesque, C., and Brown, K. (2007). "Mindfulness as a Moderator of the Effect of Implicit Motivational Self-concept on Day-to-day Behavioral Motivation." *Motivation and Emotion* 31.4 (2007): 284-99. Web.
- Lewin, K (1942). Time perspective and morale. G Watson (Ed.), *Civilian morale*, Reynal & Hitchcock, New York (1942), pp. 48-70
- Maslach, C., Jackson, S. E. (1981). The measurement of experienced burnout. *Journal of Occupational Behavior*, 2, 99–113.

- Maslach, C., Jackson, S. E., Leiter, M. P. (1996). Maslach burnout inventory manual (3rd ed.). Consulting Psychologist Press.
- Maslach, C., Schaufeli, W. B., Leiter, M. P. (2001). Job burnout. *Annual Review of Psychology*, 52, 397.
- McManus, F., Surawy, C., Muse, K., Vazquez-Montes, M., & Williams, J. M. G. (2012). A randomized clinical trial of mindfulness-based cognitive therapy versus unrestricted services for health anxiety (hypochondriasis). *Journal of Consulting and Clinical Psychology*, 80(5), 817.
- Miller, K., and Shifflet, R. (2016). "How Memories of School Inform Preservice Teachers' Feared and Desired Selves as Teachers." *Teaching and Teacher Education* 53 (2016): 20-29.
- Nilsson H, Kazemi A. Reconciling and Thematizing Definitions of Mindfulness: The Big Five of Mindfulness. *Review of General Psychology*. 2016;20(2):183-193.
doi:10.1037/gpr0000074
- Nuttin, J., Lens, W (1985). Future time perspective and motivation. Theory and research method. Leuven University Press & Erlbaum, Leuven & Hillsdale, NJ (1985).
- Oyserman, D., Bybee, D., Terry, K., & Hart-Johnson, T. (2004). Possible selves as roadmaps. *Journal of Research in Personality*, 38(2), 130e149.
- Pirelli, G., Formon, D.L. & Maloney, K. (2020). Preventing vicarious trauma (VT), compassion fatigue (CF), and burnout (BO) in forensic mental health: Forensic psychology as example. *Professional Psychology: Research and Practice*, 1, 1-14. doi: 10.1037/pro0000293

- Raynor, J.O. (1981). Future orientation and achievement motivation: Toward a theory of personality functioning and change. G d'Ydewalle, M Lens (Eds.), *Cognition in human motivation and learning*, Leuven University Press & Erlbaum, Leuven & Hillsdale, NJ (1981), pp. 199-231
- Reardon S. (2015). Ebola's mental-health wounds linger in Africa. *Nature*. 2015;519:13-4.
- Roeser, R. W., Skinner, E., Beers, J., & Jennings, P. A. (2012). Mindful-ness training and teachers' professional development: An emerging area of research and practice. *Child Development Perspectives*, 6, 167–173.doi:10.1111/j.1750-8606.2012.00238.
- Shigemura J., Ursano RJ., Morganstein JC., Kurosawa M., Benedek DM. (2020). Public responses to the novel 2019 coronavirus (2019-nCoV) in Japan: mental health consequences and target populations. *Psychiatry Clin Neurosci*. 2020 Feb 8. doi: <http://10.1111/pcn.12988>.
- Sirigatti, S., Stefanile, C. (1992). Aspetti e problemi dell'adattamento italiano del MBI [Aspects and problems of the Italian adaptation of the MBI]. *Bollettino di Psicologia Applicata*, 202–203, 3–12.
- Sirigatti, S., Stefanile, C. (1993). Adattamento e taratura per l'Italia [Adaptation and calibration for Italy]. In Maslach, C., Jackson, S. (Eds.), *MBI Maslach Burnout Inventory. Manuale [MBI Maslach Burnout Inventory, Manual]* (pp. 33–42). Organizzazioni Speciali.
- Tucci V., Moukaddam N., Meadows J., Shah S., Galwankar SC., Kapur GB. (2017). The forgotten plague: psychiatric manifestations of ebola, zika, and emerging infectious diseases. *J Glob Infect Dis*. 2017;9:151-6.

Weinstein, N., Brown, K., and Ryan, R. (2009). "A Multi-method Examination of the Effects of Mindfulness on Stress Attribution, Coping, and Emotional Well-being." *Journal of Research in Personality* 43.3 (2009): 374-85. Web.

World Health Organization. Global Health Estimates 2016: disease burden by cause, age, sex, by country and by region, 2000-2016. Geneva: WHO; 2018.

Zarate, K., Maggin, D. M., & Passmore, A. (2019). Meta-analysis of mindfulness training on teacher well-being. *Psychology in the Schools*, 56(10), 1700–1715.
<https://doi-org.libproxy.nau.edu/10.1002/pits.22308>