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Edited by Rozaliya Ziryanova and Khikmatullo Urazbaev

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KEYNOTE SPEAKERS:

Dr. Joyce Kling, Lund University, Sweden

Prof. Anthony Liddicoat, University of Warwick, UK

Mr. Aidan Holland, British Council, Spain

Mr. Christopher Vasiliou, MM Publications, UK

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PREFACE

It is with great pleasure and enthusiasm that we, the organizing committee of the 4th International Conference on Education and Linguistics (ICEL), present the conference proceedings for our 2023 edition. This year's event has successfully brought together researchers, educators, and practitioners from around the world to share their latest findings and insights in the interdisciplinary fields of education and linguistics. The theme of ICEL 2023, "Drivers of Learner/Student Success: Insights into Teaching, Learning and Research," highlights the importance of integrating cutting-edge research and methodologies to foster a more inclusive and effective global educational landscape.

Over the course of the conference, we had the privilege of hosting more than 90 oral presentations, and 4 keynote speeches, featuring an array of topics that span various aspects of education and linguistics. The diverse range of research areas covered in these proceedings includes language acquisition, pedagogical approaches, assessment and evaluation, technology-enhanced learning, bilingualism and multilingualism, sociolinguistics, and corpus linguistics. We believe that the rich compilation of papers presented in this volume will not only contribute to the existing body of knowledge but also inspire further research and collaboration among scholars and practitioners.

The success of ICEL 2023 would not have been possible without the hard work and dedication of numerous individuals and organizations. We would like to express our deepest gratitude to our keynote speakers for their thought-provoking and engaging presentations, as well as all the participants for their valuable contributions to the conference. Additionally, we would like to acknowledge the tireless efforts of our reviewers, who meticulously evaluated each submission to ensure the quality and relevance of the papers included in these proceedings.

ICEL 2023 Organising Committee

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AN INVESTIGATION OF STRESS, MINDFULNESS, AND SELF-EFFICACY AMONG ENGLISH LANGUAGE LEARNERS AT UNIVERSITIES IN UZBEKISTAN

Dr. Laurie A. Wolfe, Anoka Ramsey Community College, USA

Dr. Ximena Suarez-Sousa, Minnesota State University Moorhead, USA

Dr. Azizbek Mukhamedov, Jizzakh State Pedagogical University, Uzbekistan

azizbekmuxamedovuzb@gmail.com

Keywords: *mindfulness, stress, self-efficacy, English language learners, Uzbekistan*

Description: Mindfulness has been shown to impact an individual's physical and psychological well-being; however, research regarding mindfulness, stress, and learning is limited. This study investigated the relationship between mindfulness, self-efficacy, and stress in English language learners in the Central Asian country of Uzbekistan. A total of 372 Uzbek university students completed an online questionnaire assessing mindful awareness, perceived stress, and their self-efficacy in learning English. Mindfulness was negatively correlated with perceived stress (r_s=-.394, p<.01), compared to a positive relationship between mindfulness and self-efficacy (r_s =.109, p<.05). No relationship was found between self-efficacy and stress. Women showed higher self-efficacy compared to men (p=.003). Interestingly, Russian speakers reported the least mindfulness (p<.001) and the most stress (p=.019). The average perceived stress score for Uzbek students was higher than previously established norms for American students. Results suggest Uzbek students have high levels of perceived stress and may benefit from stress reduction techniques. More research into mindfulness and other stress reducing interventions among Uzbek university students is needed.

Problem Statement

In February of 2014, the cover of *Time* featured a photo of a woman meditating with the title "The Mindful Revolution." In the issue, journalist Kate Pickard (2014) wrote about how to find peace in a stressed-out world through mindfulness. This *Time* cover story is just one example of the rise in discussion of and popularity of mindfulness in the West over the past few decades. According to a 2018 report released by the Centers for Disease Control, the use of meditation among adults increased threefold between 2012 and 2017 (Clarke et al., 2018), which corresponds to an increase in research related to mindfulness. Between 1966 and 2020 there were over 16,000 studies published related to mindfulness, with the number of publications increasing by an average of 23.5% per year from 2010 to 2020 (Baminiwatta and Solangaarachchi, 2021). Despite exponential growth in the number of publications related to mindfulness in the past twenty years, studies in education have remained flat at only approximately 5% of the total studies published (Baminiwatta and Solangaarachchi, 2021). Additionally, the majority of this research has taken place in Western countries. Few published studies related to mindfulness or stress have been conducted in Central Asia.

Mindfulness is an ancient contemplative practice that dates back approximately 3,000 years to early yogic and Hindu writings such as the Patanjali's Yoga-sutras and the

Bhagavadgita. Both texts describe mental practices to achieve higher levels of consciousness and enlightenment through the control of one's thoughts (Bhagavadgita, 1994; Patanjali Yoga Sutras, 2014). One of the first scientific studies to investigate the effect of mindfulness on subjects' physical well-being was conducted in 1982 by Kabat-Zinn, one of the foremost names in the field. Kabat-Zinn developed an intensive 10-week mindfulness training program for 51 patients experiencing chronic pain that had not responded to any previous treatments. His results showed dramatic improvements in the level of pain the patients experienced and showed significantly fewer symptoms of psychological distress. Since that seminal study was published, thousands of studies have shown the positive physical and psychological effects of mindfulness training (Baminiwatta and Solangaarachchi, 2021).

There is a significant amount of research into the efficacy of mindfulness practices for reducing anxiety among university students. Galante et al. (2018) conducted a Randomized Controlled Trial (RCT) of the effect of mindfulness on student stress during exams. This is one of the largest RCTs conducted to date with 616 participants who were undergraduate students at Cambridge University in the UK. All students were randomly assigned to either the mindfulness training group or to a standard student support group that was already offered at the University. Results indicated that mindfulness was significantly better than the control condition at reducing student distress during examinations. A recent meta-analysis conducted by Bamber and Morpeth (2019) included 25 studies with 1492 participants. The majority of these studies "were conducted in the USA (s = 15). The authors found a large overall effect size for Mindfulness Based Interventions (MBIs) of .56 with a SE of .07.

There is additional research to suggest that MBIs can improve academic performance specifically in the area of language learning. Scida and Jones (2017) conducted a quasi-experimental study with 249 Spanish language students at the University of Virginia. The students self-enrolled in a section of Advanced Intermediate Spanish, but sections were randomly assigned to be either a mindfulness or a control group. The mindfulness sections began each class session with 5-10 minutes of guided mindfulness practice which included a variety of approaches such as mindful yoga, breathing, meditation, and body scan. Students in the control group received no treatment at all and class began as usual. Results showed that students in the mindfulness group had significantly higher test scores than the non-contemplative group.

Another factor that may impact student academic performance is their self-efficacy as it relates to learning. Numerous studies have shown a relationship between self-efficacy and academic performance. Alyami et al. (2017) investigated the effect of both perceived stress and academic self-efficacy on the academic performance of 214 Saudi psychology students. Results showed high levels of perceived stress among the students, as measured by the Perceived Stress Scale (PSS-10). While there was no significant relationship between perceived and academic performance, there was a small but significant positive correlation between self-efficacy and academic performance. A similar study conducted in Australia investigated the relationship between chemistry lab anxiety and student's self-efficacy (Kurbanoglu and Akin, 2010). Kurbanoglu and Akin used the self-efficacy subscale of the Motivated Learning Strategies Questionnaire (MLSQ) to measure self-efficacy. Results showed that self-efficacy negatively predicted chemistry lab anxiety. That is, lower self-efficacy predicted higher levels of anxiety related to chemistry lab.

The purpose of the current study was to investigate the relationship between mindfulness, stress, and self-efficacy as it relates to English language learning among Uzbek university students. Despite the abundance of research related to the topic of both mindfulness and stress, little is known about how either of these variables relate to learning. The goal of the current survey was to learn more about the perceived stress of university students in Uzbekistan who are studying English as a foreign language and how mindfulness and self-efficacy relate to their stress. The researchers investigated four main research questions. RQ1: What is the difference between levels of stress between men and women? RQ2: What is the difference between levels of self-efficacy between men and women? RQ3: What is the relationship between mindfulness and stress? RQ4: What is the relationship between self-efficacy and stress?

Methodology Statement

Setting

This study was conducted in the Central Asian country of Uzbekistan. Although the native language is Uzbek, under Soviet times most of the population there spoke Russian, as a result Russian is still widely spoken in the country. As noted earlier, President Shavkat Mirziyoyev has implemented several reforms to the educational system, including a push to improve the quantity and quality of English language instruction across the country.

Uzbekistan is a developing country whose educational system is just beginning the process of modernization. Most teachers utilize a teacher-centered approach to teaching with little interaction between the teacher and students, as well as among the students themselves. This is slowly changing as teachers receive more training in student-centered methodologies. Classes are offered almost exclusively in person. Most of the English faculty at the universities included in this study have the equivalent of a master's degree in their field. While some of them have spent time in an English-speaking country, none of the English faculty are native English speakers.

Participants

This study included 372 participants recruited from public universities in Uzbekistan where students primarily study to become English language teachers. The majority of participants identified as women (69.4%). The largest number of participants (49.2%) lived in Jizzakh, a small town approximately 90 minutes by train from the capital city. The next largest group (21.8%) was from Tashkent, the capital city. The remaining participants lived across various regions of the country. Nealy all participants (90.6%) reported that their religious affiliation was Muslim. The marital status of subjects was split between single (41.7%) and married (25.5%) or engaged to be married (8.3%). Divorce is uncommon in Uzbekistan, so it is not surprising that only two subjects (.5%) reported that they were divorced. It is interesting to note that 16.7% of participants failed to respond to the question about marital status. While it is impossible to know for sure without additional follow-up, this might be due to the social pressure that young people, especially women, face in Uzbekistan to get married. Unmarried women may have felt uncomfortable acknowledging this, even on an anonymous survey. Full demographic characteristics of the participants can be seen in Table 1.

Table 1

Demographic Characteristics of Participants

Participant Characteristic	*n*	*%*
Gender		
Man	71	19.1
Woman	258	69.4
Prefer Not to Say	16	4.3
Missing	27	7.3
Religious Affiliation		
Muslim	337	90.6
Christian	1	.3
Unaffiliated	2	.5
Prefer Not to Say	5	1.3
Missing	27	7.3
Marital Status		
Single	155	41.7
Engaged to be Married	31	8.3
Married	95	25.5
Divorced	2	.5
Other	27	7.3
Missing	62	16.7
Participant Characteristic	*M*	*SD*
Age	23.7	5.4
Years of Study of English	5.1	2.7
Years of University Study Completed	2.9	1.3
Fluency in English (on a scale of 1-10)	6.3	1.6
Fluency in Uzbek (on a scale of 1-10)	9.2	1.6
Fluency in Russian (on a scale of 1-10)	4.3	2.8

Sampling

As previously noted, this study used a convenience sample. Participants were recruited from English classes at several public universities in Uzbekistan. Students enrolled in English courses were invited to participate in the study either by one of the researchers visiting classes and sharing the link to the survey or through a University's Telegram channel. Because participants were not randomly sampled from the broader population of English students across Uzbekistan, the generalizability of the results is limited.

Instrumentation

The survey used in this study consisted of items taken from established inventories of stress, mindfulness, and self-efficacy with an additional twelve demographic questions. The survey was estimated to take 10-15 minutes to complete, which is slightly longer than recommended. However, given that this was the first survey of its kind to be conducted in Uzbekistan, the researchers felt it was worth risking some degree of attrition to gain a greater depth of information. Further, the survey was conducted online, and participants could respond at any time and from any location they found convenient so that location concerns and instrument decay were minimized.

A possible threat to internal validity is the fact that this study was conducted with non-native English speakers. To obtain responses for students with a lower level of proficiency in English, the survey was translated into both Uzbek and Russian; the two native languages spoken by most Uzbeks. To ensure the integrity of the instrument in both the translated languages, two of the study's authors, fluent in all three languages, and skilled in translation, independently translated the survey and then compared their translations. Any differences were discussed, and a final translated version was agreed upon. The full English version of the questionnaire is included in Online Resource 1. Uzbek and Russian versions can be obtained by contacting the corresponding author.

The survey consisted of 43 closed-ended items, making up four sections in the questionnaire. The questions were taken from three existing psychological or educational measurements with an additional twelve demographic questions. The first section of the questionnaire consisted of the 15-item Mindful Attention Awareness Scale (MAAS). The MAAS was developed by Brown and Ryan (2003) to assess a key characteristic of mindfulness, being open to and aware of the present moment. Respondents were presented with 15 statements related to their level of awareness of present moment occurrences and asked to indicate how often each statement reflects their everyday experiences. Respondents answered using a 6-point Likert scale, with 1 Almost Always and 6 being Almost Never. A higher total score is reflective of greater degree of mindful awareness. The MAAS was selected for use in this study because it is brief, consists of only a single factor (mindful awareness), and has been shown to have good reliability and validity across several languages, including Spanish, Dutch, German, Turkish, and Chinese (Barajas and Garra, 2014).

The next section of the survey focused on self-efficacy, which was measured using questions adapted from the Motivated Learning Strategies Questionnaire (MLSQ) self-efficacy subscale. The MLSQ was developed by Pintrich and de Groot (1990) to assess various facets of college students' motivation and learning strategies in college courses. The MLSQ consists of 81 self-report items across two sections: motivation and learning strategies. The MLSQ has good internal reliability and construct validity. (Pintrich, et. al., 1991). The self-efficacy subscale consists of eight items from within the motivation section. According to the MLSQ manual, self-efficacy subscale measures a person's perception of their own ability to master a task. This includes "judgments about one's ability to accomplish a task as well as one's confidence in one's skills to perform that task." (Pintrich, et. al., 1991, p.) Subjects are presented with a statement and asked to rate how true that statement is for them on a 7-point Likert scale (1=not at all true, 7=very true). A higher total score indicates a greater degree of self-efficacy. The self-efficacy subscale has excellent internal reliability (α=.93) and moderate predictive validity. Self-efficacy subscale scores have moderate, but statistically significant, predictive validity. Scores successfully predicted student GPA (*r*=.41).

The final section of the questionnaire was made up of the ten items from the Perceived Stress Scale (PSS-10). This is one of the oldest and most widely used tools for measuring perceived stress in everyday life. It was developed in 1983 by Cohen, Kamarck, and Mermelstein and has been translated into over 30 languages (Baik et al., 2019; Cohen, n.d). The PSS-10 measures respondents' levels of stress in their everyday life, as they perceive it. Subjects were asked to consider how often, in the last month, they have felt a particular way and give their response using a five-point scale ranging from (0) Never to (4) Very Often. A higher total score indicates higher levels of perceived stress. The PSS has good internal reliability with α=.84 and α=.85 across two samples of

colleges students. The scale also has good test-retest reliability coefficients of *r*=.85 over two days, and *r*=.55 over six weeks. The six weeks comparison is understandably lower given that the PSS asked students about the amount stress they have experienced "in the last month." The PSS has moderate concurrent validity with a correlation of *r*=.65 with the Life Events Scale among the college student samples.

Data Collection

The survey was created using the online program, Qualtrics, and distributed to 618 Uzbek University students enrolled in English languages classes. The questionnaire was shared with students through an in-class announcement and a link provided via Telegram, an online social media platform commonly used in Uzbekistan. The post included a description of the study and an invitation for all students who were 18 and older to complete the survey. A total of 372 completed surveys were received for a response rate of 60%.

Ethical Considerations

The questionnaire asked students to report their perceived anxiety with everyday experiences, their level of mindful awareness, and their confidence in their ability to learn English. These questions present minimal risk of harm to the subjects. It is possible that answering questions about their level of stress brought an awareness of their own stress to the forefront of participant's minds. To mitigate any possible psychological discomfort this may cause, links to several stress reduction exercises were included at the end of the survey. Letters of permission were obtained from the appropriate administration official at the Uzbek universities and permission was received from the first author's Institutional Review Board. Participation was voluntary and anonymous. Respondents were also allowed to skip any question they felt uncomfortable answering. No students were required to take the surveys, nor could it be identified which students completed the survey. Information about the purpose of the study, confidentiality, and the ability to withdraw consent was included on the survey welcome page and the informed consent letter was available to download via a link at the end of the welcome page.

Results

Before conducting any significance testing, the distribution of scores on the MAAS, MLSQ and PSS were assessed to determine if there were significant outliers and if scores were normally distributed and had homogeneity of variance. A Kolmogorov-Smirnov test of normality (see Table 2) showed that the average results for the MAAS, the MLSQ, and the PSS were not normally distributed. therefore, non-parametric tests were used to test all hypotheses.

Table 2

Kolomogorov-Smirnov Test of Normality

	Statistic	df	Sig.
MAAS Score	.057	372	.006
MLSQ Score	.085	372	<.001
PSS Score	.061	372	.002

In order to test the impact of gender on both perceived stress and self-efficacy, Mann-Whitney tests were conducted. While there was no significant difference in scores on the PSS due to gender, there was a statistically significant difference in self-efficacy

between men (*Mdn* = 39) and women (*Mdn* = 43). The Mann-Whitney test showed this to be statistically significant *U* (N_{women}=257, N_{men}=71) = 7059, *z* = -2.94, *p* = .003. The associative research questions were tested using Spearman's Rho. Results showed that there was no significant relationship between self-efficacy and stress. However, there was a significant negative correlation between mindful awareness and perceived stress, r_s (372) = -.394, *p* < .001.

Additional Questions

Because Uzbekistan is a former Soviet country, many people speak both Russian and Uzbek. As noted earlier in this paper, there has recently been a push by the government for more people to learn English. To ensure the subjects accurately understood the survey questions, the survey was provided in Uzbek, English, and Russian (see supplemental file for the complete survey in all three languages). Subjects were instructed to take the survey in whichever language they felt most comfortable with. Slightly more than half of the participants (54.3%) completed the survey in Uzbek, 30% took the English version, and 15.7% opted for the Russian version. Participants who completed the survey in Russian had the lowest average score for mindfulness and the highest average score for perceived stress while Uzbek speakers showed the highest mindfulness scores. English and Uzbek speakers had equivalent perceived stress scores. Average scores on the self-efficacy scale were similar across all three languages. Table 3 displays the means and standard deviations for the MAAS, MLSQ, and PSS composite scores by language of the survey.

Table 3

Scores by Language

	Language of Survey	N=372	Mean	SD
MAAS Score (Mindfulness)	Uzbek	*n*=202	63.92	11.74
	English	*n*=112	56.96	14.27
	Russian	*n*=58	53.90	13.88
MLSQ Score (Self-Efficacy)	Uzbek	*n*=202	41.26	7.92
	English	*n*=112	40.36	8.25
	Russian	*n*=58	40.72	7.15
PSS Score (Perceived Stress)	Uzbek	*n*=202	18.39	5.83
	English	*n*=112	18.27	5.34
	Russian	*n*=58	20.34	4.92

A Kruskal-Wallis test of significance showed that the language in which the participants chose to take the survey had a significant impact on their mindfulness scores, *H* (2) = 32.47, *p* < .001. Participants who took the survey in Uzbek had higher mindfulness scores (*Mdn* = 64.00) than those who took it in English (*Mdn* = 57.00) or Russian (*Mdn* = 55.50). Pairwise comparisons showed there to be statistically significant differences between the Uzbek and English speakers and the Uzbek and Russian speakers (See Table 4).

Table 4

Pairwise Comparisons of Language of Survey on Mindful Awareness scores

Sample 1-Sample 2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig.[a]
Uzbek - English	-54.169	12.664	-4.277	<.001	.000
Russian -Uzbek	-77.158	16.013	-4.818	<.001	.000
English- Russian	22.989	17.390	1.322	.186	.559

a. Significance values have been adjusted by the Bonferroni correction for multiple tests.

Additional testing showed that language also had a significant effect on participants Perceived Stress scores, H (2) = 7.93, p = .019. Participants who took the survey in Russian had higher Perceived Stress scores (*Mdn* = 21.50) than those who took it in English (*Mdn* = 18.27) or Uzbek (*Mdn* = 18.00). Pairwise comparisons showed there to be statistically significant differences between the Russian and English speakers and the Russian and Uzbek speakers (See Table 5).

Table 5

Pairwise Comparisons of Language of Survey on Perceived Stress scores

Sample 1-Sample 2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig.[a]
Uzbek - English	-1.860	12.649	-.147	.883	1.000
Uzbek - Russian	42.487	15.994	2.656	.008	.024
English - Russian	-44.347	17.369	-2.553	.011	.032

a. Significance values have been adjusted by the Bonferroni correction for multiple tests.

Although no significance testing could be done, the average PSS score for all respondents was noticeably higher (M = 18.66) than established norms (Cohen et al., 1983) for students in the Unites States (M = 14). The averages PSS score on this survey was similar to results the first author obtained with a sample of 123 Uzbek high school students during a 2019 project. At that time, the author also administered the PSS to students in 7th through 11th grade from four public high schools in the capital city of Tashkent. Results of that survey yielded an average PSS score of 17 of a total possible score of 40. Analysis of the data by other demographic variables such as marital status, years of study of English, and fluency level of English did not show any significant differences in mindfulness, self-efficacy, or stress for any other variable.

Discussion

The purpose of this study was to investigate the relationships between mindfulness, self-efficacy, and perceived stress, as well as the impact of gender on these variables, among English students in Uzbekistan. Results of the study showed that a significant negative correlation exists between mindful awareness and perceived stress. Participants with higher mindfulness scores reported lower levels of perceived stress and vice versa. This is consistent with previous studies conducted in other parts of the world, particularly Western countries (Baminiwatta and Solangaarachchi, 2021; Bamber and Morpeth, 2019). This is the first study of its kind conducted in Central Asia, specifically in Uzbekistan, with a predominantly Muslim population. Given the cultural and religious differences it is important that this study demonstrated the relationship between mindfulness and stress exists within this population.

No significant relationship was found between stress and self-efficacy as it related to English language learning, but gender did have a significant effect on self-efficacy scores. Women reported higher self-efficacy than men did. This was surprising given that Uzbek culture is highly patriarchal, and women are often treated as inferior to men in many spheres of society. However, this survey was conducted primarily at pedagogical universities and many of the respondents were training to become English teachers. It is possible that in this context women studying to be English teachers have more confidence than the men.

While most demographic variables were found to have no significant effect on mindfulness, stress, or self-efficacy, the language in which the participants took the

survey did impact perceived stress scores. As noted in the Results section, participants who chose to take the survey in Russian had significantly higher perceived stress scores than participants who responded in Uzbek or English. It is the opinion of the authors, two of which are Uzbek who are experts in translation, that this does not appear to be a result of the translation itself but rather related to cultural differences among Uzbeks who are native Russian speakers versus native Uzbek speakers. One possible explanation for this finding is that due to cultural differences between native Russian and native Uzbek speakers, participants who chose to take the survey in Russian may have a better understanding of what stress is and were therefore more able to report their own symptoms of stress. Additionally, Russian speakers are more likely to have close personal and cultural ties with Russia than are Uzbeks who opted to complete the survey in Uzbek or English. Given that this survey was conducted in the Spring of 2022, during the height of the Russian invasion of Ukraine and intense pressure being exerted against Russia via sanctions from the West, it is possible that the cultural Russians living in Uzbekistan were experiencing a greater degree of stress at that time than other Uzbeks. A follow-up study should be conducted in the future to see if this is a long-term difference or simply a byproduct of world events occurring while the survey was being conducted.

Regardless of language of the survey, participants had higher average PSS-10 scores than their American peers. Cohen et al. (1994) conducted a large-scale study of 2,387 respondents in the U.S. and found the average score on the PSS-10 to be 14.2 for respondents ages 18-29. The average score for Uzbek students on the current survey was 18.66. When disaggregated by language, the average PSS-10 scores were 18.27 for English speakers, 18.39 for Uzbek speakers, and 20.34 for Russian speakers. The highest possible score on the PSS-10 is 40. These results are consistent with previous research conducted by the author that found the average PSS-10 score of Uzbek high school students to be 17. This suggests that Uzbek students are experiencing higher levels of stress than their American peers. Stress is generally not recognized as a significant issue within Uzbek culture and as a result, little information is available to Uzbeks about how to recognize the signs of stress and students are not taught techniques for stress management. Given the negative physical, psychological, and educational effects of chronic stress (Bamber and Morpeth, 2019), it is imperative that students be given tools to manage their stress. This study suggests that not only do Uzbek students experience higher levels of stress but also that mindfulness training may be an effective way to lower the perceived stress levels of Uzbek students. Future studies should investigate the effectiveness of mindfulness training in reducing stress of Uzbek students. Additional studies are needed to determine the impact of stress on the academic performance of Uzbek students and if mindfulness training can improve learning outcomes.

It is important to note that there are a number of limitations of this study. The study made use of convenience sampling, mainly from two large pedagogical universities, so the findings may not be generalizable to the broader population of students. A nationwide study of the levels of stress and mindfulness of all students, regardless of which university they attend or their program of study, would be helpful in determining the validity of the results of the current study. Additionally, the respondents of this study were predominantly women. Future studies are needed to determine the levels of stress and mindfulness of Uzbek students who identify as men. Finally, there may have been an issue with instrumentation in this study. The survey was accessed 618 times, but only 372 respondents submitted complete responses. While this was a good response rate (60%), approximately 20% of the total respondents consented to completing the survey but then

exited out of the survey before answering any questions. The first question block presented was the 15-item MAAS, formatted as a large matrix question. Most Uzbeks access the internet via a smartphone, rather than a computer. It may have been that matrix formatting did not display well on their phones, discouraging them from completing the survey. Any follow-up studies using a survey should consider using a more mobile friendly format.

Despite these limitations, the current study adds valuable information about the role those underlying variables, such as gender or language spoken, may play in students' experiences of mindfulness, stress, and their own self-efficacy. Furthermore, while several meta-analytic studies have shown a beneficial effect of mindfulness on stress (Borquist-Conlon et al., 2019; Halladay et al., 2019; Zarate and Passmore, 2019) this study extends the scope of the research to investigate the relationship between self-efficacy and stress. Finally, there is a lack of research in non-western countries there is an absence of studies conducted in Central Asia and Africa (Baminiwatta and Solangaarachchi, 2021). The current study was conducted in Central Asia, specifically Uzbekistan, with predominantly Muslim participants. This is a significant contribution to the field as there are no currently published studies that have been conducted in Uzbekistan and only a one study that looked at the effect of mindfulness on reducing stress specifically among participants who identify as Muslim (Albatnuni and Koszycki, 2020).

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