

## Effect of Blue Light Muraqaba Meditation (BLMM) on Stress and Performance: The Development of a Measurement Scale

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### ABSTRACT

**Purpose:** The study aimed to develop the factor structure and measurement scale for Blue light muraqaba meditation (BLMM). Furthermore this study attempts to study the relationship between BLMM practice, stress and performance.

**Methodology/Design:** We conducted focus group sessions with experts of BLMM and analyzed the published research on different forms of meditation. This effort resulted in the development of four factor 16 item measure for empirical testing. The data was collected from 91 respondents who practiced BLMM for one month. We used exploratory & confirmatory factor procedures for the evaluation of structure and reliability of the scale.

**Findings:** The results suggest that a nine item four factor structure i.e. Relaxation, Attention, Awareness, & Transcendence is effective in the assessment of BLMM experience. This measure can be used for the effect of BLMM on stress and performance.

**Originality/Value:** Blue light muraqaba meditation (BLMM) is a hybrid form of concentrative and mindfulness meditation. It can be used for stress management & human development. No measure is currently available for the evaluation of BLMM experience.

**Implication:** This measure can be used for the effect of BLMM on stress and performance.

**Limitations:** The notable limitation for this research is that the sample size is relatively small.

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### INTRODUCTION

“Blue Light Muraqaba Meditation (BLMM)” is a far less researched meditation practice as compared to other eastern meditation practices. It is defined as a process through which an individual gives the mind a freedom (mindfulness component) to focus on a single point (concentrative component) (Azeemi, 2008). No

empirical study on the effectiveness of Muraqaba is available in the existing literature yet it is being practiced by more than 50 million human beings worldwide. This practice is derived from the Islamic “Sufi” thought and is perceived as a religious practice of Muslims. However, the literature of “Sufism” does not restrict this practice to Muslims only; rather it has been emphasized as a practice beyond religion to seek

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divine guidance. This study is a beginning effort to identify the potential of BLMM in affecting human attitude and behaviour. We anticipate that such understanding could be beneficial to different domains of knowledge specifically psychology, psychiatry, neuroscience & organizational studies. In the current study, Muraqaba is conceptualized as a set of different techniques that use a combination of concentrative and mindfulness meditation.

Effectiveness of a beginning level Muraqaba of blue lights is studied for two reasons. Firstly, it is more relevant to the current understanding of meditation as a non religious practice (e.g. Fell, Axmacher, & Haupt, 2010; McLean, 2010). Secondly, we expect that BLMM, like other meditation practices, could be effective in the management of stress and performance. Based upon the theoretical foundations of meditation in general and Sufism in specific, a customized validated measure is proposed to study the experience of Blue light muraqaba meditation (BLMM). This study is based on three objectives.

1. To develop a measure for BLMM
2. To study the relationship between BLMM practice and stress.
3. To study the relationship between BLMM practice and performance.

## LITERATURE REVIEW

### Meditation Practices & Muraqaba Meditation

Previous research is indecisive upon a comprehensive classification of meditation practices (Fell et al., 2010; Wachholtz, Malone & Pargament, 2017). In a review of meditation practices, Ospina et al. (2007) classified meditation into five broad categories that include Mantra meditation (e.g. Transcendental Meditation, Relaxation Response, & Clinically Standardized Meditation), Mindfulness Meditation (e.g. Vipassana, Zen, MBSR, & Mindful-based cognitive Therapy), Yoga, Tai Chi

& Qi Gong meditation. Reavley and Pallent (2009) propose that meditation practices can be categorized into two distinct approaches of concentrative and mindfulness meditation. Concentration-based techniques involve focusing attention on a particular stimulus, such as a mantra, sound, object or sensation. Mindfulness meditation approach emphasize on non-judgmental attention to the present moment. (Bishop et al., 2004; Kabat-Zinn, 2003; Margolin, Pierce & Wiley, 2011). Both types of meditation practices usually last for fifteen to thirty minutes (McLean, 2010). Recent conceptualizations also confirm that all meditations do not produce similar outputs. (Schmidt-Wilk, 2000).

Muraqaba is a distinct form of meditation and does not fall explicitly under the existing classifications of different meditation practices. (See for a review: Grossenbacher & Quaglia, 2017; Ospina, et al. 2007; Reavley, & Pallent, 2009; Thompson & Waltz, 2007). A careful review of Muraqaba Meditation (see Azeemi, 2005) practices reveals that all Muraqaba meditation includes both concentrative & mindful components. Generally the muraqaba meditation starts with a concentrative exercise of focusing on an object that follows a mindfulness component of non-judgmental attention. It includes a set of different practices to gain enlightenment and spiritual well being.

However, some Muraqaba meditation practices like Blue light Muraqaba meditation are specifically suggested for the reduction of stress and other psychological problems. Blue light Muraqaba meditation (BLMM) is a beginner level meditation practice and is based upon the “theory of color & beyond” (Urdu word for the concept is Nazria-a-Rang-o-Noor). Theory of color & beyond (Azeemi, 1995), suggest that blue light is a source of energy and through meditation the energy can be conserved and even increased. This gives meditators with greater inventory of energy in stressful situations. The

psychological presence of energy develop an efficacy to manage stress rather than perceiving stress as a threat to well being. Like all Muraqaba practices, it includes concentration and mindfulness components. The process of BLMM is as follows

*“The Blue Light Muraqaba Meditation begins with a breathing exercise. Meditators are asked to sit in a comfortable position with their backs kept straight. They are then told to breathe through the nose for five seconds and exhale from the mouth taking the same time. This makes six of these cycles every minute. Once the meditators are settled with this breathing exercise, they are told to imagine and visualize blue lights coming down from the sky and getting absorbed in their brains and travelling throughout their bodies. The meditators are advised to keep absorbing the power of the blue light for 15-20 minutes. It is further advised that “let your mind wonder as it desires and “neutrally” observe the thoughts that flow through your mind one at a time”.*

**Effects of meditation**

Formerly, effects of meditation were considered similar to passive relaxation, however recent empirical findings suggest that it has more active affects which involve cognitive restructuring and learning. (Fell et al., 2010). Previous research on mindfulness meditation suggests that it is helpful in attention & self-regulation (May et al., 2011; Pepping, Walters, Davis & O’Donovan, 2016; Tang et al. 2009) and task performance (Course-Choi, Saville & Derakshan, 2017; Dane, 2011). On the other hand, concentrative meditation increases relaxation and certainty (Mohanta & Thooyamani, 2010; Sandler et al., 2017; Sutoris, 1995; Shapiro, Carlson, Astin & Freedman, 2006). Based upon the known effects of mindful and concentrative meditation merged with in-depth interviews of BLMM meditators and scholars, a measure is developed to study the effectiveness of Blue light Muraqaba Meditation.

**Table 1. 16 Items Blue Light Muraqaba Meditation Measure**

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<b>Description of Items</b>	
Relaxation Effect	
1.	I feel relaxed
2.	I feel peace
3.	I feel fatigue (R )
4.	It gives me physical rest
Attention Effect	
1.	I feel I can better concentrate
2.	I feel attentive to one thing at a time.
3.	I feel my way of looking at things is changed
4.	I feel I can better focus
Awareness Effect	
1.	I feel I have greater knowledge and understanding of my life activities
2.	I feel my exposure is broadened
3.	I feel clarity in my thoughts
4.	I feel I have greater knowledge and understanding of my life activities
Transcendental Effect	
1.	I feel a divine association.
2.	I feel myself very big.
3.	I feel an immense internal pleasure
4.	I feel a divine association.

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### Measurement of Meditation Experience

Various psychological (e.g. Reavley & Pallant 2009; Thompson & Waltz, 2007) and physiological measures (Fell et al., 2010) have been used to gauge the effect of meditation practice. A number of scales are used to measure the mindfulness meditation practice like. The Mindful Attention Awareness Scale (MAAS) (Brown & Ryan, 2003), The Freiburg Mindfulness Inventory (FMI) (Buchheld, Grossman & Walach, 2001) and The Kentucky Inventory of Mindfulness Skills (KIMS) (Baer et al., 2004), Five factor mindfulness questionnaire (FFMQ) (Baer et al., 2006) have been criticized to partially fulfilling the different dimensions of the meditation construct. (See for a review Walach, et al. (2006). A recent measure named "effect of meditation scale" (EOM) developed by Reavley and Pallant (2009) measures the cognitive, physical, emotional, and spiritual effects of meditation both during meditation and in everyday life. Three key components common in most of the mindfulness meditation programs as identified by Germer (2005) are awareness, being in the present moment, and acceptance.

### MEASUREMENT OF BLUE LIGHT MURAQABA MEDITATION (BLMM)

The existing measures are either based on concentrative or mindfulness meditation. Blue light muraqaba meditation (BLMM) discussed in the current study is a mix of concentration and mindfulness. This requires a customized measure to gauge the effectiveness of Blue Light Muraqaba meditation. To identify the effects of BLMM, a focus group study was conducted with scholar and practitioners of BLMM. A list of different effects on BLMM was identified. This list was further synthesized to find commonalities with existing literature on concentrative and mindfulness meditation. Based on this integration, it is inferred that the first beneficial effect of meditation is relaxation. When an individual sits in isolation, this time-out, gives an opportunity to relax and spend time with one's own self. We believe that mindfulness component of Muraqaba Meditation serves better than the concentrative component in relaxing the meditators.

Though Mohanta and Thooyamani (2010) suggest that concentrative meditation is effective in providing relaxation yet the "Let it go" notion of mindfulness provides a more logical explanation of a temporary relief from existing thoughts. (Dane, 2011). It is largely similar to as if an individual goes to sleep. Research done in most of the clinical settings seems to tap this

**Table 2. Total Variance Explained**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadingsa
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	4.649	38.738	38.738	4.649	38.738	38.738	3.465
2	2.028	16.903	55.642	2.028	16.903	55.642	2.388
3	1.688	14.067	69.708	1.688	14.067	69.708	2.963
4	1.191	9.928	79.637	1.191	9.928	79.637	3.202
5	.763	6.355	85.991				
6	.443	3.694	89.686				
7	.354	2.952	92.638				
8	.305	2.538	95.176				
9	.257	2.138	97.314				
10	.145	1.206	98.519				
11	.113	.939	99.458				
12	.065	.542	100.000				

beneficial effect. However there is strong scientific evidence in clinical settings that beneficial effect of meditation cannot be restricted to mere relaxation (Tang et al., 2009). Based on this evidence the second beneficial component of meditation is identified as concentration effect. When an individual, in a meditation session concentrates on one specific object (In this study it is blue light) this develops an ability to focus on one object at a time (Mohanta & Thooyamani, 2010).

Concentrative component of muraqaba meditation plays a vital role in developing attention capabilities of meditators as compared to the mindfulness component. Past research on mindfulness (Van den Hurk, Gionmi, Gielen, et al., 2010) suggests that mindfulness significantly affects the attention efficiency. We were not able to identify any comparative study on concentrative and mindfulness meditation in the context of attention efficiency. We believe that the concentrative component of muraqaba

from a different perspective mindfulness research (Zeidan, Johnson, Diamond, David, & Goolkasian, 2010) also suggest that “moment to moment understanding of feelings” also results in attention efficacy. When an individual continuously practice meditation this ability is sharpened. The learned ability from meditation replicate/reflect itself in the execution of different life roles. The third beneficial effect of meditation is awareness effect. Giving attention to an object reveals greater information about the object. So with greater concentration an individual is able to have greater information about the requirements of successfully performing different life roles. Greater awareness about role requirements merged with an inner understanding of efficacy ultimately sharpens the decision making ability of individual (Hede, 2010; Germer, 2005). Finally, the fourth component of Muraqaba meditation is identified as transcendental effect. Many studies have confirmed the higher cognition state of meditators (Thompson & Waltz, 2007; Davidson

**Table 3. Pattern Matrix**

No.	Item	Component			
		1	2	3	4
1	Awareness 3	.951	.054	.014	-.045
2	Awareness 2	.934	.024	-.039	.035
3	Awareness 1	.802	-.035	.025	.147
4	Transcendence 1	-.005	.908	-.258	-.026
5	Transcendence 3	-.011	.841	.070	.135
6	Transcendence 2	.113	.780	.283	-.102
7	Attention 2	.026	-.065	.906	.061
8	Attention 3	.190	-.037	.857	-.083
9	Attention 1	-.146	.111	.778	.119
10	Relaxation 2	.001	.024	-.100	.944
11	Relaxation 1	.008	-.011	.121	.828
12	Relaxation 3	.122	-.003	.056	.752

**Note:** Extraction Method: Principal Component Analysis.  
 Rotation Method: Oblimin with Kaiser Normalization.  
 a Rotation converged in 6 iterations.

enables an individual to focus on one object. This learning of focusing on one object transfer itself in dealing with different life situations. However,

et al., 2003; Osis, Bokert & Carlson, 1973; Zeidan et al., 2010). The transcendental effect occurs due to the combined effect of

concentrative and mindfulness components of BLMM.

In summary, effectiveness of BLMM experience should be measured on four proposed components that include relaxation, attention, awareness and transcendence. A sixteen item measure, four items for each component, is developed for validity testing. All items were measured on a five point likert scale ranging from (strongly disagree) to 5 (strongly agree).

## METHODOLOGY

Sample One hundred and five students of MBA class were contacted to participate in an experimental study. All students were trained on Blue light muraqaba meditation in a one day session. They were then advised to practice the muraqaba meditation for one month. At the conclusion of the study all participants filled the 16 item measure (See Table 1) along with demographic information. Ninety one students confirmed that they had been practicing muraqaba meditation for at least twenty days in the given month. The data collected from these students was used for analysis. Exploratory and

groups both. Four items adapted from Caplan, Cobb, French, Van Harrison and Pinneau (1980) were used to measure pull stress. Four items push stress measure was adopted from Rasool, (2012). All items were measured on a five point likert scale ranging from 1 strongly disagree to 5 strongly agree. The instrument was reliable at pretest and posttest level with an internal consistency of Push Stress (.84, .88) & Pull Stress (.90, .88).

Performance was measured at pretest and posttest levels from experiment and control groups both. Self-rated work performance was examined with five items scale developed by Williams & Anderson, 1991. All items were measured on a five point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The instrument was reliable at pretest and posttest levels at job performance (.74, .76).

Table 4. Correlations of study variables

	Mean	S.D	1	2	3	4	5	6	7	8	9
1 <b>Age</b>	1.02	.14	-								
2 <b>Gender</b>	1.98	.23	.63**	-							
3 <b>Relaxation</b>	2.86	.71	-.05	-.12	-						
4 <b>Attention</b>	2.81	.74	.39**	.03	.39**	-					
5 <b>Awareness</b>	3.23	.85	.57**	.34**	.57**	.34**	-				
6 <b>Transcendence</b>	2.98	.74	.17	.09	.25*	.09	.25*	-			
7 <b>Push Stress</b>	3.34	.93	.16	.20	.16	.20	.16	.20	-		
8 <b>Pull Stress</b>	2.98	1.30	-.75**	-.12	-.37**	.02	.10	.02	.10	-	
9 <b>Performance</b>	3.65	1.07	.64**	.44**	.40**	.24*	.27**	-.19	.27**	-.19	-

Note: \*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

confirmatory factor analysis procedures were used to test the factor structure and reliability of the proposed questionnaire.

Push and Pull Stress were measured at pretest and posttest levels from experiment and control

## DATA ANALYSIS

### Exploratory Factor Analysis

We started the factor analysis by using KMO and

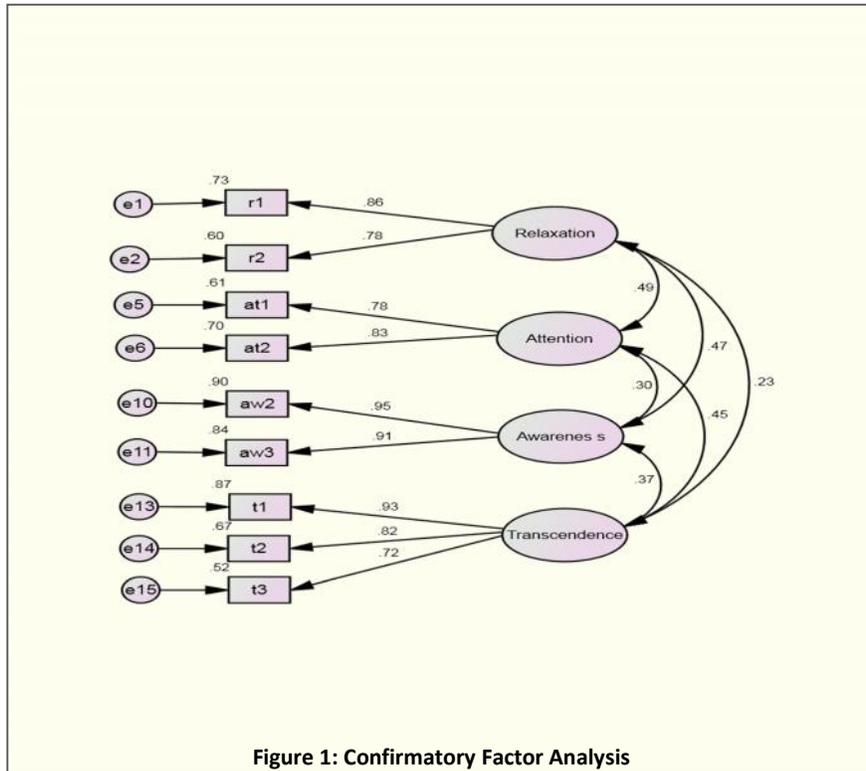


Figure 1: Confirmatory Factor Analysis

Barlett’s test by Kaiser-Meyer-Olkin measure of sampling. The study had an adequate measure sampling at .666 which is above the minimum acceptable value of .60 as suggested by Tabachnick & Fidell, (2007). The items were subjected to exploratory factors analysis using principal axis factoring with Oblimin rotation

extraction and Eigen value greater than one. Initial extraction revealed five factors against the expected four factors. The factor items were analyzed to identify cohesiveness. One item each from attention, relaxation & awareness subscales was loading on different factors. These items were forming an additional factor with no conceptual relevance. Based upon scree plot &

Table 5. Co-variances among Four Factors

Factors			Estimate	S.E.	C.R.	P
Attention	<-->	Awareness	.200	.085	2.366	.018
Attention	<-->	Transcendence	.194	.063	3.058	.002
Attention	<-->	Relaxation	.233	.075	3.124	.002
Awareness	<-->	Transcendence	.215	.075	2.877	.004
Awareness	<-->	Relaxation	.300	.091	3.300	***
Transcendence	<-->	Relaxation	.097	.055	1.754	.079

parallel analysis four factors were retained. The problematic items were deleted and remaining items were retained for factor analysis. The new extraction resulted in a four factor solution. The reliability of subscales was assessed using Cronbach's (1951) coefficient alpha. The values for the subscales were analyzed. To shorten the measure, one item from the transcendental subscale was further deleted that resulted in enhanced reliability. Coefficient alpha values for the subscales were as follows: Relaxation (.84), Attention (.84), Awareness (.91), & Transcendence (.86). The overall measure was also reliable at coefficient alpha 0.87.

### Confirmatory Factor Analysis

We analyzed the factor structure and reliability of measure using confirmatory factor analysis. It was confirmed that four factors structure was better than all the competing structures. BLMM four factor 16 items instrument was further synthesized.

We analyzed the variances and co-variances of the four postulated factors. Analysis of correlations, covariance, regression weights and residual covariance led to the deletion of seven items instead of four items as identified in exploratory factor analysis. These include one item from transcendence subscale two items each from relaxation, attention & awareness subscales. The resultant four factor 9 items BLMM scale (See table 6) includes two items for measuring relaxation, attention, & awareness subscales and three items for measuring transcendence subscale. Co-variances among four factors are

given in table 6. The results confirm that all subscales were positively related to each other. The analysis of squared multiple correlations reveal that in all items explain at least 50% of the variance is accounted for by their respective subscales. The estimated reliability of all items except t3 (transcendence subscale item) were greater than .60 level.

### DISCUSSIONS

In previous research, effectiveness of concentrative and mindfulness meditation are separately evaluated. Concentrative and mindfulness are separate constructs and are not studied together. Keeping in view the current state of research, BLMM measure is unique for following reasons. Firstly, in the development of a measure, theoretical foundations of Muraqaba Meditation are integrated with empirical evidence on concentrative & mindful meditation. Muraqaba meditation by definition is a combination of concentrative & mindful meditation. Such hybrid meditation practices are rarely investigated empirically but may reveal useful insightful information to researchers & practitioners. We anticipate that BLMM could be useful in such investigations. Secondly, our findings indicate that four dimensions of BLMM provide a simple yet comprehensive view of evaluating meditation experience.

The initial correlation analysis indicates that different components are distinct in their effect

**Table 6. Items Blue Light Muraqaba Meditation validated measure (BLMM - 1.1)**

Description of Items
<b>Relaxation Effect</b>
1. I feel relaxed
2. I feel peace
<b>Attention Effect</b>
1. I feel I can better concentrate
2. I feel attentive to one thing at a time.
<b>Awareness Effect</b>
1. I feel my exposure is broadened
2. I feel clarity in my thoughts
<b>Transcendental Effect</b>
1. I feel a divine association.
2. I feel myself very big.
3. I feel an immense internal pleasure

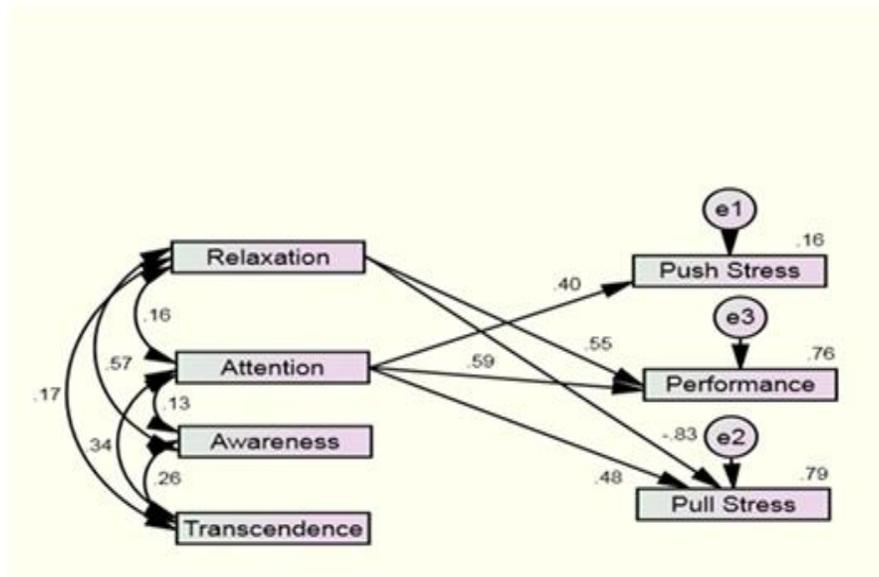


Figure 2: Effect of Blue Light Muraqaba Meditation on Stress and performance

on stress and performance. This preliminary evidence suggests that BLMM could be effective in relating different components of Muraqaba Meditation with work attitudes and behaviours. Future studies should test the effectiveness of BLMM in different contextual settings. Three, out of four subscales were positively related to each other. However, one dimension (i.e. Transcendence) was not significantly related to another dimension (i.e. Attention) of the scale. Furthermore, transcendence was also not related with stress and performance outcomes. We consciously included this dimension into the overall scale for two reasons. Firstly, “Sufi” literature on Muraqaba Meditation emphasize on the transcendental effect of Muraqaba meditation unanimously. Secondly, the literature of mindfulness meditation (e.g. Germer, 2005; Giommi, 2006; Grepmaier, Mitterlehner, Loew, Nickel, 2007) also suggests transcendental experiences.

Relaxation component of BLMM experience is effective in reducing pull stress and increasing performance. Attention component of BLMM is

also positively related to performance. In the current sample the awareness and transcendence components of BLMM were not related to stress and performance. This study is based upon a small sample of 91 respondents. The exhaustiveness of the study to gauge the validity of a measure with such a small sample is questionable. Future studies should use larger samples to study the effectiveness of BLMM measure. Exploratory & confirmatory factor analysis has been used to validate the instrument. The competing factor structures are not studied rigorously. Future studies should test the measure on different theoretical structures and sensitivity. The convergent validity of the measure has not been tested in the current study. Future studies should evaluate the effectiveness of measure in explaining effects of Muraqaba meditation. It could be interesting to find that how different mindful and concentrative practices of meditation relate to the four dimensions of the proposed construct? The reliability of the effectiveness of BLMM should be tested with larger sample and the use of different contexts. This study provides

an initial evidence of the effects of BLMM on stress and performance. The mechanism through which BLMM exerts its effects on stress and performance should be explored. In the current study self report measures are used to access stress and performance and are prone to common error bias. Future research should use more objective measures to access stress and performance. The use of BLMM as an organizational intervention for conflict and stress management could reap interesting insights.

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