TRANSFORMATIONAL LEADERSHIP BEHAVIOR AND MINDFULNESS: EVIDENCE AMONG AUSTRIAN MBA GRADUATES

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Abstract

Present paper aims to answer the research question whether transformational leadership behavior can benefit from a mindful stance of the leader. It postulates a research model of relating self-reported transformational leadership behavior to self-reported mindfulness, meditation practice and health behavior. An online survey has been returned by N=238 Austrian MBA Graduates with average of 9.67 years of leadership experience. Correlation and regression analysis revealed that transformational leadership behavior is positively influenced by mindfulness by up to 19%. Analysis also indicates positive influence of meditation practice and certain health behavior on mindfulness. Overall findings can have an impact on mainstream leadership education programs, as early adopters like Google, Facebook or LinkedIn have established Mindful Leadership programs for some time now.

Keywords: Transformational Leadership behavior, Mindfulness

Introduction

In today's times of highly volatile global market environments, transformational leadership models are as popular as ever among theorists and practitioners as they prove to be effective in times of change and crisis. Furthermore, transformational leadership fosters well-being and a number of other positive effects related to follower and organizational performance. Recent developments focus on the authentic and ethical aspect of leadership behavior, not only after some major corporate bankruptcy crises involving inauthentic and unethical leadership behavior have surfaced. Also, the global corporate world is hampered in ever more increasing speed and severity by stress- and burnout related losses of productivity. On the other hand, Mindfulness has proven to yield positive effects on a large number of clinical symptoms, with individuals attending various forms of Mindfulness practice courses. Meditation experience as part of Mindfulness practice is taught in a secular setting and at the same time pursuing the traditional Buddhist path of ethics, contemplation and wisdom. Due to Kabat-Zinn's MBSR (Mindfulness Based Stress Reduction) courses, a standardized eight-week course on stress reduction which has gained huge popularity in every walk of life, Mindfulness is moving out of its original clinical application and into the corporate world. Scholars have started to apply Mindfulness research outside its clinical setting to address a variety of organizational behavior issues, most recently leadership being one of them. Research on mindfulness and leadership is still in its infancy   with only a very limited number of empirical studies published. However, a number of corporate leadership education programs have adopted Kabat-Zinn's MBSR courses in order to provide stress relieve to corporate executives with sweeping success. Google's "Search Inside Yourself" program is just one example. As practitioners report positive outcomes of such executive mindfulness trainings, research still has to keep up with this development to underpin its success with evidence validated among leadership populations. Therefore, the aim of this research paper is to investigate the influence mindfulness has on transformational leadership behavior. Analysis reveals that transformational leadership behavior is significantly and strongly to moderately influenced by mindfulness. It is further reported that meditation practice and health improving behavior have a strong to moderate influence on mindfulness. The model developed and validated shall contribute to current research on mindfulness and leadership to further understand how different aspects of mindfulness benefit aspects of leadership behavior. Present work shall also initiate a discussion of the necessity to develop a mindful measure dedicated for Mindfulness research among general public business populations. Also, it shall support leadership education research by further refining mindful leadership education programs and their measures of control of outcome.

Theoretical Foundations

Since the beginning of recorded history, "leadership" has been recognized as a social phenomenon that occurs in all groups of people, regardless of geography, culture or nationality. Many examples from ancient Chinese and Greek leaders to Egyptian king-leaders to exceptional leaders of modern times have always fascinated people, and researchers in particular. However, as Bass[1] notes, the term leadership has only appeared in the English language in the 13th century. More recently, scholars have shown a vast interest in leadership. Dubrin[2] in 2004 counted more than 40.000 books and articles written about leadership. Good, or effective Leadership is important since examples of bad leadership are immanent in hundreds of studies covering diverse areas of today's business live including education, sports, entertainment, politics or industry. It is well noted by various writers cited in present research, that employee and organizational performance are linked to effective leadership behavior[3]. Also, numerous studies emphasize on follower and organizational outcomes due to in-effective or worse leadership behavior. Historically, leadership theory has gone through stages. Before 1900, the Great Man Theory represented the notion that great leaders were born and not made. Up to the 1950s, trait theory was perceived as state-of-the-art, denoting various leaders' inherent characteristics responsible for effective leadership, including e.g. extraversion or intelligence. For the next approximately 20 years, behavioral theories emerged to explain effective leadership by noting that ideal patterns of behavior for every situation are relevant. Since the 1970s, leadership theories emphasize on the situational aspect of leadership behavior, meaning the need and skill for a leader to flexibly vary his behavior to specific requirements of situations. Since then, it is widely accepted that certain leadership traits are beneficial for analyzing given situations to respond with the most appropriate leadership behavior needed. As definitions on leadership are numerous within the different leadership theories, the author deems to state and slightly alter the definition given by Howell & Costley: Leadership is a process used by an individual to influence followers towards the achievement of goals in which the follower views the influence as legitimate[4]. The following core aspects of the definition will be considered further: First, *Leadership process* means the application of behavioral leadership pattern and actions in a fairly consistent way. Howell and Costley note "*that most experts today focus on the series of actions or patterns of behavior that nearly all leaders exhibit*". Second, for *influence*, they note "*...leaders typically use various behaviors to influence followers*". Third, they assume that a single *individual* will carry out the leadership role for a given follower or group of followers. Forth, for followers to see the influence as *legitimate*, Howell & Costley define the influence as reasonable and justifiable for a given situation. To achieve follower compliance, they note that leaders "in modern societies" exert behaviors of reward or recognition, of displaying expertise, of superior knowledge, of moral rightness, of formal authority, and of threat of punishment for noncompliance[5]. For the purpose of present study, which is to develop and test a model of Mindful Leadership, the author further focuses on situational leadership theories with emphasis on the individual leader, his personality traits and his effective leadership behavior. Within the group of situational leadership theories, many writers have agreed on core leadership behaviors, including supportive-, directive-, participative- and charismatic (transformational) leadership behavior, which are further considered.

Mindfulness is the absence of Mindlessness[6]. Langer, a professor of psychology at Harvard, advocates this pragmatic definition of Mindfulness in her 1995 book "Mindfulness". Based on her research experiments over the last 25 years, she lists three kinds of mindlessness, their causes and costly effects. The kinds of mindlessness she found include (1) *trapped by categories*, which is when people mindlessly rely on defined categories as opposed to creation of new categories (which Langer in turn defines as mindful activity), (2) *automatic behavior*, which is when people tend to mindlessly rely on known and learned behavior without actually noticing whether it makes sense or not for a given situation[7], (3) *acting from a single perspective*, which is not to consider alternative options or only to follow a single set of rules.

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1 cf. Bass, B. B. M., & Stogdill, R. (1990)
2 cf. Dubrin, A. (2007)
3 cf. Bass, B. M. (1985); Judge, T. a, & Piccolo, R. F. (2004); Oh, I.-S., Courtright, S. H., & Colbert, a. E. (2011);
Lowe, K. B., Kroeck, K. G., & Sivasubramaniam, N. (1996)
4 cf. Howell, J. P., Costley, D.L. (2006), p. 4
5 cf. Howell, J. P., Costley, D.L. (2006), p. 5

For causes of mindlessness, she lists (1) *repetition*, where a familiar structure or rhythm leads to lack of attention, (2) *premature cognitive commitments*, that is when people form a mindset on first encounter of something and then stick to this mindset on re-encounter of the same thing, (3) *belief in limited resources*, which as an example is the belief that 100 meter can not be run by man under 10 seconds, until someone breaks the record and the new limited belief is that it can't be run under 9 seconds, (4) *entropy as limiting mindset*, which is to assume that everything wears down over time to allow a feel of control[8], (5) *education for outcome*, which is to be orientated on the outcome (asking "Can I do it") rather than on the process ("How do I do it")[9], (6) the power of context, where contexts control peoples' behavior, e.g "whisper in hospitals or become anxious in police stations". For costly effects on mindlessness, she notes (1) narrow self-image, (2) unintended cruelty, (3) loss of control to make intelligent choices, (4) learned helplessness, and (5) stunted potential. Her ground-braking experiments in the field of Mindlessness helped to draw attention to the Mindfulness concept, primarily because mindless behavior is well recognized our western society[10,11]. To counteract mindlessness behavior, Langer   defines "*Key qualities of a mindful state of being as: (1) creation of new categories, (2) openness to new information and (3) awareness of more than one perspective*"[12]. Lange asserts that "*the psychological and physical costs we pay because of pervasive mindlessness and, more important, about the benefits of grater control, richer options, and transcended limits that Mindfulness can make possible (…) and only hints at the enormous potential of the mindful state*" [13]. Shapiro and Carlson suggest Mindfulness as an inherent human capacity, and a skill, which can be trained and cultivated. They further assert "*Mindfulness is fundamentally a way of being, it is a way of inhabiting our bodies, our minds, and our moment-by-moment experience*" [14]. Further to this definition describing Mindfulness as a state of being, Shapiro et. al. list three core elements of Mindfulness: intention, attention and attitude[15]. For intention, they assert the "knowing why" of paying attention, involving reflecting on own values, goals, hopes and "setting one's heart compass in the direction one want to be heading". They claim that reflecting on one's values, motivations and intentions is an essential element of Mindfulness. For attention, Shapiro et. al. use the definition which is in line with many scholars, which is to attend one's experiences in the present moment, in the here and in the now. For attitude, they assert the "how" of paying attention, involving "an attitude of curious open-heartedness". Brown & Ryan define Mindfulness is "*inherently a state of consciousness*"[16]. They assert to distinguish consciousness from other modes of mental processing like cognition, motives or emotion, where one can be conscious of thoughts, motives or emotions as well as sensory or perceptual stimuli[17]. They further define (1) Awareness as the "background-radar" of consciousness, continuously monitoring internal and external environment, and (2) Attention, drawing from a definition of Westen, as " a process of focusing conscious awareness, providing heightened sensitivity to a limited range of experience"[18]. Ryan & Deci support Langer's view by suspecting that "Mindfulness may be important in disengaging individuals from automatic thoughts, habits, and unhealthy behavior patterns and thus could play a key role in fostering informed and self-endorsed behavioral regulation, which has long been associated with well-being

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6 cf. Langer, E. J. (1995)

7 cf. Langer, E. J., Blank, A., & Chanowitz, B. (1978)

8 cp. Langer, E. J. (1995), pp. 29. If systems stay the same or would get better over time, there is less opportunity for involvement (control). This belief is also represented in the (limited) view of the world in general.

9 cp. Langer, E. J. (1995), pp. 29. She gives an example: "If we think we know how to handle a situation, we don't feel a need to pay attention"

10 cf. Langer, E. J. (1989)

11 cp. Langer, E. J. (1989a). pp. 19 12 cp. Langer, E. J. (1989a). pp. 62 13 cp. Langer, E. J. (1989a). pp. 203

14 cf. Shapiro, S., & Carlson, L. (2006)

15 cf. Shapiro, S. L., Wang, M. C., & Peltason, E. H. (2015)

16 cp. cf. Brown, K. W., & Ryan, R. M. (2003)

17 cp. cf. Brown, et. al. (2003) p. 822

18 cf. Westen, D. (1999)

enhancement"[19]. Kabat-Zinn, founder of the Centre of Mindfulness at Massachusetts University Medical School in 1979, is perceived as pioneering the introduction of Mindfulness to the western (academic) world by defining Mindfulness as "*paying attention on purpose, in the present moment and non-judgmentally*"[20]. In the late 70s, Kabat-Zinn was among the first to start gathering empirical evidence on the positive effects of Mindfulness in clinical settings through creation of mindful training courses for stress reduction (MBSR) and Mindfulness-based cognitive therapy (MBCT)[21]. Although those MBIs, in the literature also referred to Mindfulness practice, are based on traditional ancient Buddhist practices, Kabat-Zinn was the first to define Mindfulness training courses in an entirely secular context, making those trainings widely available for therapeutic applications on (non-specialist, non- religious) secular populations. Since thirty years, a full body of research has grown out of Kabat-Zinn's work, with many writers providing evidence of positive impacts of Kabat-Zinn's Mindfulness training applied to a large number of clinical conditions[22], spanning from alcohol and substance abuse, anxiety and depression to chronic pain treatment or sleep problems [23]. Throughout this period, scholars have conceptualized Mindfulness based on its (Eastern) Buddhist tradition as well as on (Western) psychological and behavioral concepts[24], and a set of measures has evolved mainly as self-reported scales, featuring a language addressing a mix of clinical, psychological and Buddhist traditional concepts[25]. Conceptualization of Mindfulness has gone through stages: Brown and Ryan assess awareness and attention of internal and external events[26]. Wallach et. al. proposed to assess non-judgmental present moment awareness[27]. Baer et. al emphasize five facets of Mindfulness, including (1) observing, (2) describing, (3) acting with awareness, (4) non-judgment of inner experiences and (5) non-reactivity to inner experiences[28]. A most recent conceptualization of Mindfulness includes eight dimensions as opposed to a single dimension construct some ten years ago[29,30]. Bergomi et. al define those eight dimensions of Mindfulness as (1) awareness of internal (self) processes and states, including emotions, sensations, perceptions or cognitions, (2) awareness of external (environment) experiences including current external stimuli, events or objects, (3) awareness of one's current actions, (4) the trait to non-judgmentally accept internal or external stimuli as they occur, (5) to decoupling the self from experiences and be able to non-react on experiences, (6) general openness to experiences, (7) to be able to relativize one's own thinking and (8) to understand present circumstances in an insightful manner[31].

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[19] cf. Ryan, R. M., & Deci, E. L. (2000)

[20] cf. Kabat-Zinn, J. (1990), (1993), (2003)

[21] cf. Kabat-Zinn, J. (2003a)

[22] cf. for instance, Kohls, N., Sauer, S., & Walach, H. (2009).

[23] Evans, S., Ferrando, S., Findler, M., Stowell, C., Smart, C., & Haglin, D. (2008); Kabat-Zinn, J., Lipworth, L., Burney, R., & Sellers, W. (1987); MARCHAND, W. R. (2012); Zgierska, A., Rabago, D., Zuelsdorff, M., Coe, C., Miller, M., & Fleming, M. (2008); Zgierska, A., & Marcus, M. T. (2010); Howell, A. J., Digdon, N. L., & Buro, K. (2010).

[24] cf. Brown, K. W., & Ryan, R. M. (2003)

[25] cf. Chaskalson, M., & Hadley, S. G. (2015)

[26] cf. Brown, K. W., & Ryan, R. M. (2003)

[27] cf. Walach, H., et. al. (2004),

[28] cf. Baer, R. A. et. al. (2008)

[29] cf. Bergomi, C., Tschacher, W., & Kupper, Z. (2014).

[30] cf. Walach et. al. (2004), (2006)

[31] cf. Bergomi, C., Tschacher, W., & Kupper, Z. (2014); Brown, K. W., & Ryan, R. M. (2003); Walach, H., et. al. (2004)

Identification of Research Gap
Current Leadership theory has accepted transformational leadership as the foundation beneficial for organizations, leaders, followers and other stakeholders. However, after the ethical disasters of Enron and Worldcom in the early 2000's[32], leadership theorists have reacted and built on the successful transformational leadership theory and introduced new leadership philosophies and models by adding components like authenticity, morality or servant- hood. At the same time, concepts for personal development training to foster authentic and mindful behavior have become popular outside the leadership context, namely meditation practice. Researchers well versed with the topic assert meditation practice to foster Mindfulness as well as to foster development of authentic and ethic behavior. Furthermore, leadership has further refined and developed Transformational Leadership Behavior models. For instance, Kouzes and Posner's Five Practices of Exemplary Leadership model refines leadership behavior to better act as a role model, to better inspire, to better find ways to change, grow and improve or to better motivate. Researchers and practitioners with concern for exemplary, yet authentic leadership behavior face a dilemma today: They either opt for one model or the other. In order to overcome this dilemma, the author introduces a new model investigating the influence of Mindfulness on Transformational Leadership behavior and at the same time investigating the influence of meditation practice and health behavior on mindfulness. As the term Mindful Leadership is only emerging, current definitions in various articles and books support the notion to train executives in Mindfulness meditation programs. As these Mindfulness trainings have been applied to many different types of organizations and yielded positive effects on certain leadership traits and behaviors, the research community has started to apply meditation practice and Mindfulness research to organizational research. Some theoretical work has been conducted to suggest how leadership could benefit from Mindfulness[33,34]. However, current research falls short in a way to provide empirical evidence of effects on leadership behavior explained by Mindfulness. Therefore, present research aims to contribute to narrow this gap by introducing a research model based on Kouzes and Posner's Five Practices Leadership model combined with Bergomi's Comprehensive Mindfulness Experience model. As Mindfulness is a "transformative" individual state of being, it should foster "transformational" and mindful leadership practices as well as eventually mindful organizational cultures.

Research Hypotheses & Research Model
Based on theoretical foundations, identification of research gap and research question put forward, The author hypothesizes that those leaders, who show effective transformational leadership behavior more often, encounter Mindfulness experiences more often and engage in health enhancing behavior more often – those leaders can be titled "mindful leaders". The author further suspects that mindful leaders engage in meditation practices, which moderates the Mindfulness-Leadership relation, and also suspects that mindful leaders exhibit certain patterns of professional aspects. The author argues, that leaders in order to become more effective transformational leaders shall engage in Mindfulness enhancing practices and adhere to health improving behaviors.

Therefore, research hypotheses are defined as:
H1: Effective Transformational Leadership behavior is positively influenced by Mindfulness; meaning effective transformational leaders are mindful leaders.
H2: Leader's Mindfulness is positively influenced by Meditation Practice; meaning mindful leaders engage in Meditation Practice.
H3: Leader's Mindfulness is positively influenced by Health improving behavior; meaning mindful leaders engage in health enhancing behavior
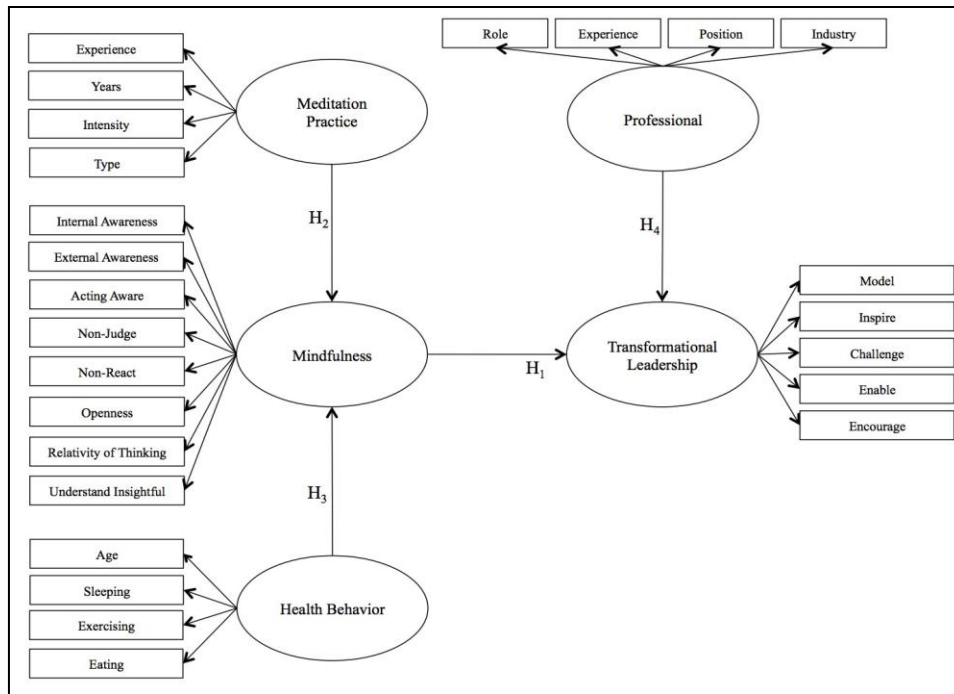H4: Professional aspects positively influence Leadership behavior

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[32] cf. Grant, J. M., & Mack, D. A. (2004)

[33] cf. Sauer, S., Andert, K., Kohls, N., & Müller, G. F. (2011)

[34] cf. Reb, J.; Sim, S.; Chintakananda, K.; and Bhave, D. P. (2015).

Figure 1: Conceptional Prediction Model[35]

Methodology

Taking the main objective of present research into consideration, the author decided to use a quantitative method of validating the Mindful Leadership model with a target population of business leaders - not with students[36]. An online survey was sent out to 3.900 past MBA graduates of the Business Department of an Austrian private university. An invitation email with a link to the online-questionnaire was sent by the dean of the university department (and not by the author) to avoid unsolicited e-mail (SPAM), including a marketing incentive for returning a complete questionnaire. Within a six week period, N=238 complete and usable returns were noted, which yielded a ca. 6% return rate. Collected data was prepared for statistical processing in SPSS, conducted as exploratory analysis for missing or corrupted data, outliers, normality and kurtosis. Construct reliability and validity were tested for related factors for LEADERSHIP and MINDFULNESS variables. For descriptive analysis, reports were prepared in LimeSurvey and SPSS to describe population sample and general indicators not hypothesized but important for later results interpretation. For hypotheses testing, mean, correlation and regression analysis were performed. Thereafter, data was prepared for export via Microsoft Excel and the research model was built in s PLS- SEM tool for Structured Equation Modeling based on Partial Least Squares Algorithm[37][38]. Path coefficients were calculated, also standardized mean root square residual (SRMR) [39] were calculated, indicates the overall model (fit) criterion[40]. Extensive reports were created for supporting interpreting results and define findings.

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[35] Author's own Figure

[36] cf. Kaplan, D. (2004)

[37] cf. Henseler et. al. (2009)

[38] cf. Lowry & Gaskin (2014)

[39] cf. Hu, L., & Bentler, P. M. (1998).

[40] cf. Hu, L., & Bentler, P. M. (1998).

Results

Five dimensions of Transformational Leadership behavior were defined according to Kouzes and Posner's Five Practices Leadership model: (1) Role Modeling behavior, (2) Inspiring behavior, (3) Challenging behavior, (4) Enabling behavior and (5) Encouraging behavior. Furthermore, eight dimensions of Mindfulness were defined according to Bergomi's Comprehensive Mindfulness Experiences Model. It was hypothesized that Mindfulness positively influences leadership behavior. Descriptive and exploratory analysis confirmed reliability and validity of both instruments with alpha (Cronbach) values of .942 and .847, respectively. Validity of both constructs could not be confirmed in SPSS as factor loadings for proposed dimensions could not be re-produced based on existing data sample of N=238 cases, however, mean and correlation analysis as well as measuring alpha (Cronbach) for individual factors of both constructs individually indicate good validity for leadership (.721 to .856) and satisfactory to good values for the Mindfulness construct (.666 to .800).

Descriptive Analysis revealed the following distribution of cases:

Table 1: Descriptive Analysis Overview, N=238[41]

Variable	Descriptor	Unit	Cases
Gender	Female		61
	Male		177
Age	20 - 29	Years	18
	30 - 39	Years	85
	40 - 49	Years	94
	50 – 59	Years	36
	60 – 69	Years	4
Meditation Experience	No Experience		173
	Experience, but stopped, currently not meditating		24
	Experience, and currently meditating		41
Meditation Experience Duration	0 - 5	Years	33
	6 - 10	Years	16
	11 - 20	Years	11
	30 - 35	Years	5
Meditation Practice Intensity,	More than 20 h per month		3
	Between 10 and 20 h		2
	Between 5 and 10 h		13
	Less than 5 h		22
	Currently, I am not meditating		24
Meditation Practice Technique (Multiple selects possible)	Zen Buddhist Meditation		15
	Transcendental Meditation (TM)		6
	Mindfulness Practice		6
	Yoga		19
	Tai Chi		6
	Qigong		6

Leadership Level	C-Level (CxO)	48
	Mid-Level	121
	Entry Level	69

Working hours per week	Less than 40 h	22
	40 to 50 h	129
	50 to 60 h	62
	More than 60 h	25

Industry	Mining, Groundwork Operations	3
	Manufacturing	32
	Energy	4
	Water- and Waste Management	1
	Building Construction	8
	Car Retail	4
	Wholesale	11
	Retail	11
	Transport	15
	Hospitality	1
	Information and Communication	34
	Banking Financial Service, Insurance	38
	Real Estate	2
	Consulting and Research	16
	Government, Administration	8
	Social Insurance	1
	Education	9
	Health Care	18
	Sports and Entertainment	1
	Tourism	5

Health Behavior Smoking (Do you smoke?)	Regularly	35
	Occasionally	25
	Quit	69
	Never Smoked	107

Health Behavior Sleeping (Do you get a good night's sleep?)	Every Night	44
	Almost every night	135
	A few nights a week	46
	A few nights a month	10

Health Behavior Exercise (How many hours per week on average?)	More than 6	41
	Between 3 and 6	89
	Less than 3	70
	I do not exercise	35

Health Behavior Eating (Do you regularly eat a balanced diet?)	Always	42
	Almost every day	94
	A few days per week	64
	Less than 3	70
	I do not think about my diet too much	19

Regression analysis revealed a moderate but significant ($p = .000$) correlation of $R = .322$ and R Square $=.104$ among Leadership and Mindfulness, where 10.4% of Leaderships variance could be explained through Mindfulness. PLS analysis revealed for the entire sample values a Path Coefficient ($R = .344$, $t = 4.038$ and R Square $= .119$. This means that H1 could not be rejected.

Although only by roughly 11%, mindfulness impacts transformational leadership behavior. As this correlation is true for the entire data sample, analyzing H1 in a split group setting, correlation analysis has revealed that among Meditators the Mindfulness-Leadership relation gets weaker ($R = .282$, $p = .023$, R Square $= .079$) as in comparison to the non-meditating group ($R =339$, $p = .000$, R Square $=.115$). However, mean values for the meditators group on Mindfulness ($M = 160.91$) and Leadership ($M = 237.42$) are higher as for non-meditators Mindfulness ($M =149.65$), Leadership ($M = 233.38$). Performing this comparison in SmartPLS, results reveal the opposite: the Meditators group (N = 65) reveals an even stronger Mindfulness – Leadership relation with Path Coefficient ($R = .434$, R Square $= .188$) compared to the non-Meditators group Path Coefficient ($R = .409$, R Square $= .167$). Those results, derived from PLS analysis, are in line with Mean analysis as Meditators score higher levels of Mindfulness and therefore higher levels of Leadership.

For testing H2 that postulates the influence of Meditation Practice on Mindfulness, two variables were tested (Meditation Experience in years and Meditation Practice Intensity) and included in stepwise regression analysis with Mindfulness as dependent variable. For the meditator group sample N=65, as for all non-meditators no values are assigned in data set, results showed a significant influence (R = .420, R Square $=.176$) of meditation on Mindfulness, which is in line with existing research. However, Meditation Experience in years was only marginally significant ($p = .05$), as opposed to ($p = .000$) for Meditation Practice intensity.

For testing H3, which postulates Health improving behavior to be positively influential for Leader's Mindfulness, stepwise regression analysis integrated Sleeping ($R = .233**$) and Eating ($R = .307**$) as significant variables contributing to explain Mindfulness ($R = .424$, R Square $= .180$) by 18%, as smoking and exercise did not significantly correlate.

Professional aspects are not hypothesized and not included in the model as they represent demographic factors. All factors defined, including (1) leadership level, (2) leadership experience (in total years of leadership positions held), number of direct reports, (4) number of total subordinates as well as (5) form of organization and (6) industry did not yield significant correlations with Leadership as dependent variable.

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[41] Author's own Table

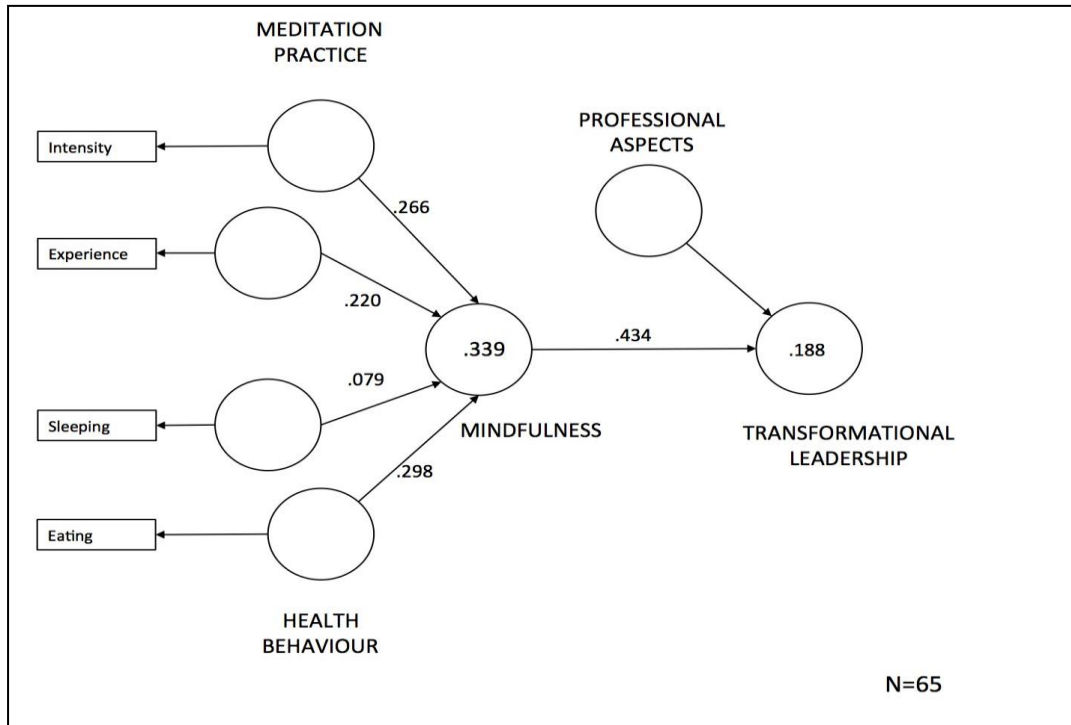Figure 2: Mindful Leadership Model, Meditators Group, N=65[42]

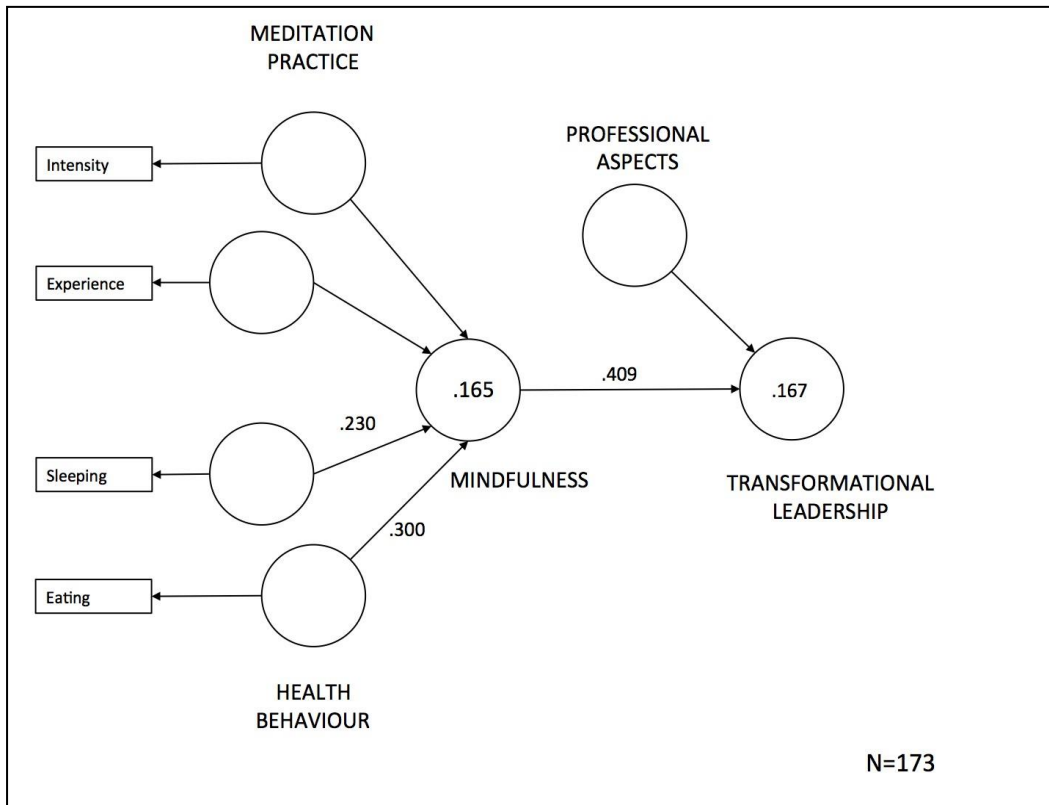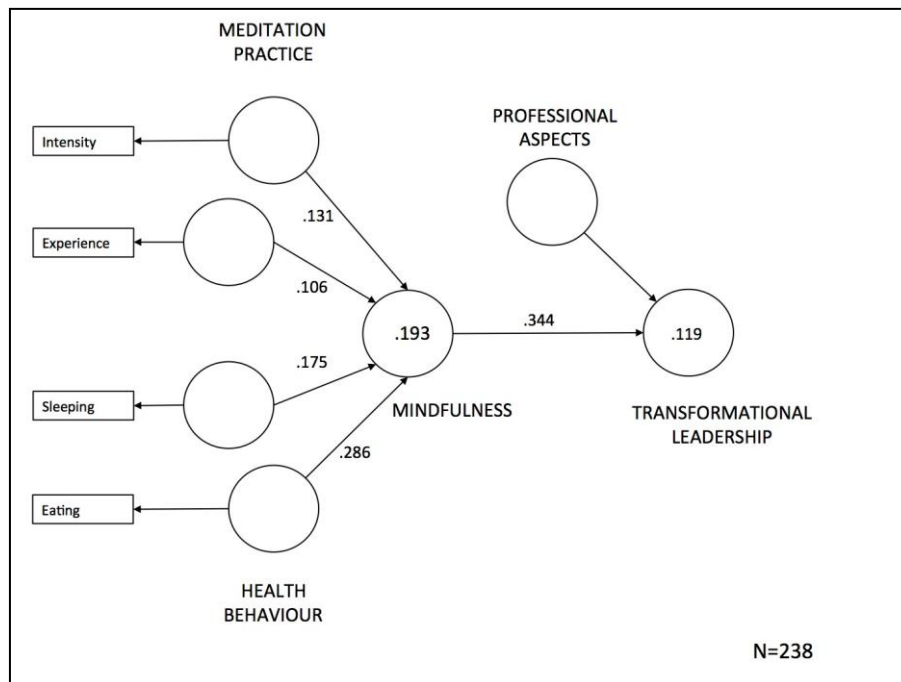Figure 3: Mindful Leadership Model, Non-Meditators Group, N=173[43]

Figure 4: Mindful Leadership Model, N=238[44]

Limitations

As the invitation to the online questionnaire yielded a response rate of roughly 6%, responses might be highly biased as responders might have opted-in to answer the online questionnaire based on personal attachment to the topic. However, distribution of results might object this notion.

Further to this, another limitation is the fact that only self-reported scores were taken into account for leadership as well as for mindfulness.

Also, as transformational leadership might not be the preferred style of leadership based on various environmental or personal factors, those leaders might nevertheless be mindful. Therefore, further studies need to incorporate other leadership styles and theories as well, which was out of scope for present research.

As sample size is large enough for investigating set forth hypothesis, sample sizes for split group analysis, e.g. types of meditation practice, are too small as those sub groups did only yield between 6 – 23 cases each.

Conclusions

1. Transformational Leadership Behavior is positively benefitted by Mindfulness. Data of entire population of 238 Leaders supports this correlation for 11 – 18%
2. Correlation of all but two factors of Mindfulness with all factors of Transformational Leadership is supported by the data
3. Non-correlating Mindfulness factors "Openness" is entirely comprised of reversed item formulation, an issue identified as suboptimal with non-meditator populations, which is confirmed by present study
4. Mindfulness factor "Openness" includes items referring to its original clinical application, mentioning "Angriness, Pain, and Fear". The author suggests to reformulation to be able to address business communities.

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42 Author's own Figure
43 Author's own Figure
44 Author's own Figure

5. Mindfulness   (a mindful state of being) can be achieved by meditation practice. Data supports this ($R = .420$, R Square $=. 176$) including Meditation Practice Intensity and (less stronger associated) Meditation Experience in years.
6. Meditation Practice does not directly correlate with Transformational Leadership Behavior
7. Different Meditation Practices yield mixed results in explaining Mindfulness as sample sizes are too small
8. Personal Health factors strongly positively correlate with Mindfulness. SEM Analysis yields strong path coefficients in both directions. In theory, the fact that Mindfulness leads to healthy eating and sleeping is less supported then healthy eating and sleeping behavior fosters Mindfulness.
9. Personal health factors Smoking and Exercise have no significant item loadings and are omitted from model.
10. Personal Health has no significant influence on Transformational Leadership Behavior
11. Personal Health has no significant influence on Meditation Practice

Suggestions & Recommendations

For leadership theorists, mindfulness shall be considered as means to look at leader's individual approach to leadership behavior. To further integrate mindfulness research into leadership research, the issue of measuring levels of mindfulness among business populations shall be addressed. Existing mindfulness measurement instruments shall be further developed to feature a language, which is (1) applicable to individuals who have no meditation experience and (2) applicable to business context (rather than to a clinical context). Furthermore, mindful leadership research shall consider the secular context of research, although, the Buddhist tradition and roots shall still form an integral part of theory. Also, as mindfulness can be explained in present study by meditation practice to approx.. 40%, mindfulness research shall draw upon other means of gaining situational attention and awareness. Mindfulness research might therefore question its current view of being indispensably and exclusively connected to meditation practice context and discover new or refined attributes of mindfulness beneficial to leadership behavior. Leadership research shall also look at ethics and morality derived from mindful behavior.

As ethical leadership theory has gained some attraction among researchers, mindful leadership might be a valid path forward to unify concepts of transformational leadership, ethics and concepts of emotional intelligence. Further research shall be conducted in this field to investigate various attributes of mindfulness and their influence on various leadership behaviors.

For leadership practitioners and educators, mindfulness concepts shall be taken into consideration for every standard leadership development program. As surely not every leader will opt in to a leadership development program, which emphasizes personal growth through meditation at the same time, educators shall research appropriate pre-selection criteria for suitability of such programs based on environmental factors like company culture or industry. Once in place, top-management commitment to set time apart for mindful leadership programs shall be in place. With this, measurement of success of those corporate programs shall be standardized, utilizing current research on mindful leadership as well as case studies of various corporate education programs in this direction. The author believes that mindful leadership will play an important role for organizations to gain an overall competitive advantage, so various personal, organizational and environmental factors shall be included in mindful leadership research. Moreover, these programs shall be incorporated into any change- or improvement strategy an organization might carry out. Furthermore, the secular character of mindful leadership education programs shall be stressed in combination with "marketing programs" to advertise the "non-esoteric", scientifically proven effectiveness of such programs.

For transformational leadership education in particular, current findings of mindfulness aspects of internal and external awareness as well as a decentered, non-reactive orientation and their influence on particular leadership behavior shall be further researched. Furthermore, once reliable instruments for business populations are available, emerging or yet "undiscovered" aspects of mindfulness shall be researched and integrated.

Based on findings of current study, any kind of mindfulness education program would enhance transformational leadership performance by up to 19%, so corporate leadership education should start implementing such programs now to start building up their competitive advantage.

Biography

Dirk Ulmcke is the founder and director of Ulmcke Consulting, which specializes in executive management consulting in the high-tech industry. He holds a bachelor's degree in computer science from University of Applied Science in Wiesbaden, Germany, a master's degree in engineering management from University of Technology in Sydney, Australia and a master's degree in executive management from Vienna University, Austria. Dirk is currently a doctoral candidate at University of Latvia, Riga, Faculty of Economics and Management. He seeks to apply results of his doctoral dissertation in his daily consulting work on Mindful Leadership.

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