

Předběžná sdělení

DEVELOPMENT OF MINDFULNESS IN RELATIONAL CONTEXT: CONSTRUCTION AND VALIDATION OF RELATIONAL MINDFULNESS TRAINING (RMT)

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ABSTRACT

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Objectives. The application of mindfulness at work has experienced growing demand in recent years. This progress also brings new challenges for the field, such as the necessity to respect the dynamic environment of contemporary organizations and moving mindfulness practice closer to the social interactions. The authors created Relational Mindfulness Training (RMT), an 8-week mindfulness-based intervention, in order to address the lack of evidence in the field of relational mindfulness.

Sample and setting. The study has examined the effects of RMT intervention on the sample of 66 students. The first measurement occurred one week prior to the start of intervention (T1). The second measurement occurred one week after the end of intervention (T2).

Hypotheses. It was hypothesized that the participation in RMT would have positive significant effects on mindfulness, self-compassion, authentic leadership and empathic accuracy.

Statistical analysis. The analysis of variance was used to access the differences between the experimental and control group between T1 and T2 and the paired sample t-test was used to assess the effects within both groups between T1 and T2.

Results. The findings suggest that training in relational mindfulness may enhance the curriculum of management education. RMT showed a significant positive effect on mindfulness, self-compassion and authentic leadership. This study is, according to the authors knowledge, the first one that validates the effects of a relational-based mindfulness program in management education and the first one to validate the effects of MBI in the Czech Republic.

Study limitation. Most variables in the study were assessed by self-report questionnaires, however most common questionnaires in the field were used. The study was also not fully blinded and thus it might have been possibly biased by placebo or experimenter effect.

key words:

mindfulness,
relational mindfulness training,
self-compassion,
authentic leadership,
empathic accuracy

klíčová slova:

všímavost,
trénink vztahové všímavosti,
sebe-laskavost,
autentický leadership,
empatická přesnost

INTRODUCTION

Modern society undergoes significant changes which are brought about by the rapid advances in technology, ongoing globalization and various aspects of economic and political instability (Sutcliffe et al., 2016). Contemporary organizations are operating under complex, uncertain and emotionally challenging conditions and the new challenges seem to pave the road for the further development of mindfulness at work

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and in management education (Good et al., 2016). Mindfulness has witnessed growing demand in both psychological and organizational research in past few years and showed numerous positive effects in the domains of stress management, well-being, performance and citizenship behaviors (Akin, Akin, 2015; Hülshager et al., 2013; Benda, 2007; Sutcliffe et al., 2016). Moreover, two pioneering studies examined the effects of mindfulness in the case of Czech Republic (Vaculík et al., 2016). The former study showed the significant positive effect of mindfulness on job performance and negative effect on neuroticism. Several studies have also examined the effects of mindfulness-based interventions (MBIs) in both organizational settings and higher education and confirmed these findings especially in the domain of well-being (e.g. Michel et al., 2014; Gregoire et al., 2015; Shapiro et al., 1998; De Vibe et al., 2013). Although one Czech neuroscientific study also examined effects of brief meditation practice (Vyšata et al., 2014), it seems that none of the Czech studies has examined the effects of MBI so far.

We suggest that MBIs might be particularly beneficial for management education in which it has not been tested so far. Mindfulness training may raise the practical impact of the curriculum through the development of individual adaptability, empathy and social connectedness that are in demand in contemporary organizations (Good et al., 2016; Sutcliffe et al., 2016). Applications of MBIs in management education should also reflect the fact, that most of the contemporary managers operate in a highly dynamic environment and they spend a most of the time in interactions with others (Good et al., 2016). We, therefore, perceive as beneficial to support the development of mindfulness in relational context (relational mindfulness) in order to bring mindfulness training closer to real social situations (Falb & Pargament, 2012).

The role of mindfulness in relationships is generally becoming a highly regarded part of mindfulness research (Good et al., 2016). Some aspects of relational mindfulness practice have been already successfully applied in the education of the teachers (Jennings et al., 2013) and we have not found any kind of the secular MBI that would be primarily focused on the relational form of mindfulness training (in dyads and triads). Therefore, we conducted a study to examine the effects of the newly developed Relational Mindfulness Training (RMT). This is an 8-week MBI program that is mainly formed by relational mindfulness practices. RMT is focused on the development of three levels of relational mindfulness (self-in-relationship, other-in-relationship, relationship-in-relationship) (Surrey & Kramer, 2013), and guides participants to be more open and caring towards both others and themselves.

We examined the effect of RMT on mindfulness, self-compassion, authentic leadership and empathic accuracy. We divided management students (N=66) into intervention and control groups and found support for the improvement of mindfulness, self-compassion and authentic leadership, as well as partial support for empathic accuracy. Our results suggest that RMT is an efficient approach for the development of mindfulness and self-compassion. Our study is, to the best of our knowledge, the first one to examine the effects of MBI based on relational practice in management education and the first one to validate the effects of MBI in the Czech Republic.

THEORY AND HYPOTHESES

Positive Effects of Mindfulness

Mindfulness is defined as “the awareness that emerges through paying attention on purpose, in the present moment, and nonjudgmentally to the unfolding of experience moment by moment” (Kabat-Zinn, 2003, p.145). It is characterized by the develop-

ment of an opened and accepting attitude towards both external and internal events (thoughts, intuitions and emotions) and helps individuals not to take things personally during all kinds of situations (Leroy et al., 2013; Sutcliffe et al., 2016). The modern form of mindfulness training is developed through the Mindfulness-based interventions (MBIs). The two most recognized MBIs, the Mindfulness-Based Stress Reduction program (MBSR) and the Mindfulness-Based Cognitive Therapy (MBCT) have shown numerous positive effects on both physical and mental health, as well as on the individual's cognitive abilities (Klatt et al., 2009; De Raedt et al., 2012; e.g. Shapiro et al., 2005). More recent applications of MBIs in workplace settings have also shown numerous beneficial effects, especially in the domains of job performance, work-life balance, work-related stress, anxiety, etc. (De Bruin et al., 2016; Gregoire et al., 2015; Michel et al., 2014; Shonin et al., 2014).

Besides the abovementioned effects, studies carried out on MBIs in higher education have further revealed beneficial effects on empathy, psychological health, well-being, social adjustment, psychological distress, etc. (Bond et al., 2013; De Vibe et al., 2013; e.g., Shapiro et al., 1998; Rizvi, Steffel, 2014). Despite the fact that MBIs recognized notable progress in higher education in recent years, it seems that none of the studies has examined the effects in management education that tends to be criticized for lacking or even undermining the moral foundations of the students (Alimo-Metcalfe, 2013).

Individual and Relational Mindfulness Practice

Growing progress of MBIs in management practice is accompanied with recommendations for making the training programs more suitable for the dynamic social conditions (Good et al., 2016). Falb, Pargament (2012) suggest that some qualities developed by individual practice such as tranquility or compassion might be difficult to maintain in the face of those challenges encountered in the inter-relational domain. Although any single intervention cannot fully substitute for real-life situations, the practice of mindfulness in the relational person-to-person context may shift mindfulness training closer towards real social challenges (Surrey & Kramer, 2013). Falb and Pargament (2012) describe relational mindfulness as an “in vivo technique (within a living thing), emphasizing the interactions between two or more people who take a deliberate stance of awareness and attention to their emotional and bodily states as influenced by their dealings with one another” (p. 352). Development of relational mindfulness is focused on three basic domains; 1) mindfulness of self-in-relationship that entails the awareness of one's mental, emotional and bodily states during interpersonal interaction; 2) mindfulness of the other-in-relationship, i.e.: the awareness of the mental, emotional and bodily states of other individuals during interpersonal interaction; and 3) mindfulness of relationship-in-relationship that represents awareness of the dynamics and aspects of interaction, which the individual co-creates with others (Surrey & Kramer, 2013).

Although the relational mindfulness approach presented in this study is new, it has predecessors in the area of intimate relationships (Carson et al., 2004). The foundations of the more general kind of relational practice (focused on all kinds of relationships) were laid by Insight dialogue, the intense form of training based on the extension of Theravada Buddhism to the relational domain (Kramer, 2007). A relational form of mindfulness practice in professional relationships has been originally developed mostly in psychotherapy (Falb & Pargament, 2012; Surrey & Kramer, 2013), and some of its aspects have already been applied in organizational settings (Tan, 2012).

Relational Mindfulness Training (RMT) and its Hypothesized Effects

MBIs based on individual mindfulness practice such as MBSR and MBCT repeatedly showed the positive impact on mindfulness (Jensen et al., 2012; Perich et al., 2013; e.g. Shapiro et al., 2007). However, we haven't found any study that examines the effect of the MBI that is based on relational practice of mindfulness. Development of mindfulness in relational context follows similar principles and faces similar challenges as individual mindfulness (Falb & Pargament, 2012; Surrey & Kramer, 2013). While practicing with others, participants need to overcome their mind wandering tendencies, such as thinking about the future or past, or clinging to prejudices about their training partner, in order to give their training partners proper non-judgmental attention (Kramer, 2007; Tan, 2012). Therefore, we suggest that relational form of mindfulness practice supports the development of mindfulness among its participants.

Hypothesis 1. Relational Mindfulness Training leads to higher mindfulness.

Another highly regarded outcome of MBIs is self-compassion (e.g., Frank et al., 2013; Neff & Germer, 2013) which is defined as “being touched by, and open to, one's own suffering, not avoiding or disconnecting from it, generating the desire to alleviate one's suffering and to heal oneself with kindness (Neff, 2003, p. 67).” Self-compassion helps individuals feel more trust while dealing with others and better handle challenging situations such as dealing with failure or uncertainty (Neff, 2011). Several studies showed significant effects of MBIs on the development of self-compassion (Frank et al., 2013; Lee & Bang, 2010; e.g., Shapiro et al., 2005, 2007), while the other studies did not report this relationship as significant (e.g., Abercrombie et al., 2007; Shapiro et al., 2011). We assume that the training in relational mindfulness might significantly contribute to the development of self-compassion. Development of relational mindfulness is based on the gradual opening to the other's as well to one's own condition during social interaction (Kramer, 2007), where non-judgmental attention and mentally present listening to each other creates a safe and healing environment (Hanh, 2014). Neff (2011) suggests that giving care to, and receiving care from others leads to the development of the ability to give and receive care. Therefore, a caring social interaction that emerges during the social interaction may have the potential to develop the self-directed caring attitude represented by self-compassion.

Hypothesis 2. Relational Mindfulness Training leads to higher self-compassion.

Recent progress of MBIs in management has given rise to discussions about its impact on leadership (Good et al., 2016). Reb et al. (2014) show that the leader's mindfulness had beneficial effects on job-satisfaction, work-life balance, job-performance and civic behaviors. Mindfulness practice is suggested for enhancing leadership skills in terms of better perception of one's followers' needs, better coping with emotional states as well as giving a more advanced ability to foster individual adaptability (Good et al., 2016; Hunter, Chaskalson, 2013). Although some authors inspire discussions about the possible emergence of mindful leadership (Goleman, 2013; Hunter, Chaskalson, 2013), the whole concept is far from the establishment of a regular leadership theory (Vich, 2015).

An alternative way to examine the role of mindfulness in leadership may be possible through the examination of its relationship with established leadership theories, such as authentic leadership (Goleman, 2013). Authentic leadership promotes the development of positive psychological capacities and ethical climate through the cultivation of self-awareness, internalized moral perspective, balanced processing of information, and relational transparency on the part of leaders as they work with their subordinates (Walumbwa et al., 2006).

Mindfulness training is suggested to be a practical method for the development of two of those qualities, the self-awareness and internalized moral perspective. Self-awareness entails a deeper insight into one's multifaceted nature of self (Avolio & Gardner, 2005) and represents an identical quality as the self-awareness facet of mindfulness that can be developed by a mindfulness practice (Bergomi et al., 2013). Furthermore, another facet of mindfulness, the acting with awareness (Bergomi et al., 2013) might support the development of internalized moral perspective, which is based on the consistency between one's values and actions (Avolio & Gardner, 2005). We further suggest that the relational mindfulness process of the open sharing of thoughts and feelings (Surrey & Kramer, 2013) seems to be consistent with the establishment of relational transparency, which refers to presenting one's authentic self to others (Walumbwa et al., 2006). Furthermore, the relational mindfulness practice that promotes listening deeply to others' opinions may further support the development of a balanced processing (that is the ability to objectively analyze all relevant data and opinions before coming to a decision). Despite many practical consistencies between authentic leadership and mindfulness practice, the relationship still lacks almost any empirical support and is limited to some correlations between trait mindfulness and authentic functioning (Leroy et al., 2013). Therefore, we examine the effects of RMT on authentic leadership.

Hypothesis 3. Relational Mindfulness Training leads to higher authentic leadership.

The second domain of the development of mindfulness in relational context (mindfulness of the other-in-relationship), during which practitioners learn to develop the awareness of mental, emotional and bodily states of other individuals (Surrey & Kramer, 2013), is a process closely related to the Theory of Mind (Baron-Cohen, 2001). Mascaro et al. (2013) showed the positive effects of training in caring mindfulness on the aspect of the Theory of Mind called empathic accuracy, which refers to the ability to accurately infer the specific content of another person's thoughts and feelings. This pioneering evidence suggests that research between mindfulness and the Theory of Mind might be promising. In order to find supporting evidence in this field, we decided to examine the effects of RMT on empathic accuracy.

Hypothesis 4. Relational Mindfulness Training leads to higher empathic accuracy.

METHODS

Program Description

Similarly to other mindfulness-based interventions like MBSR and MBCT, the RMT is an 8-week intervention, where participants attend 8 weekly sessions (2 hours per session) and one 6-hour weekend session. The RMT has a completely secular form. Every weekly session is structured in a similar way: 1) introduction talk, 2) first individual practice, 3) relational practice and sharing, 4) 10-minute break, 5) second individual practice, 6) second relational practice and sharing, and 7) sharing in the group at the end.

Relational mindfulness practice forms the main part of RMT. However, the efficiency of collective work is highly dependent on the quality of the work carried out at the individual level (mindfulness meditation, body-scan, loving-kindness meditation, etc.), as the individual practice accumulates awareness for the relational practice (Hanh, 2014). Relational mindfulness practice occurs in dyads or triads, where participants randomly choose a partner, make an eye contact and mindfully communicate with each other during practice rounds. Practice rounds are divided by silent pauses,

during which the participants observe the various aspects of their present experience in order to develop the three levels of relational mindfulness (self-in-relationship, other-in-relationship, relationship-in-relationship), and are given the instructions for the next round. Every round can take several forms: 1) both participants maintain a silent eye contact; 2) one participant speaks about his/her present/past experience and his/her partner listens; 3) both participants speak about their present/past experience and listen to each other; 4) one participant expresses understanding of his/her partner's topic and the partner listens; 5) both participants express understanding for each other and listen to each other.

Week 1 is devoted to introducing the participants to the program. Week 2 focuses on body awareness; week 3 focuses on loving-kindness meditation; week 4 focuses on self-compassion, while week 5 focuses on awareness of feelings. Week 6 is devoted to self-awareness, and week 7 deals with moral awareness, with week 8 given over to fear awareness. The weekend seminar focuses on a recapitulation of all essential practices and intense sharing in dyads and triads.

Sample

Ninety students of business administration and economics from a university located in Prague in the Czech Republic participated in our study (in the winter semester 2015/2016). A survey that was conducted by a local career development center (RPC VŠE, 2016) shows that in the year 2015/2016, the 95% students of the university reported that they worked during their studies. Furthermore, 64% of them reported that they worked in exactly the same area as the field of their study was (i.e. manager, entrepreneur, financial auditor or consultant, corporate buyer, etc.). This data indicates that although our sample was composed of students, almost all of them possessed working experience and thus can relate to it.

All recruited students expressed willingness for the personal development. Firstly, we recruited students through the career development center. This part of the recruitment entailed email to approximately 3000 students that assigned in the center. Those students were randomly assigned to intervention group (42 participants) and control group (20 participants). Secondly, we also included 28 students that voluntarily participated in the 8-week career development course in the control group (that was facilitated by the same instructor as the intervention group) in order to account for a specific effect of spending time with the facilitator of the RMT program. Therefore, the control group of our study was divided in active and passive condition. The first measurement (T1) occurred one week before the start of the program.

Thirty-three intervention group participants have successfully completed training and participated in the second T2 measurement (one week after the completion of RMT). Seven participants left RMT and two participants were not allowed to complete it because they did not fulfill the attendance quotas. The control group had fifteen participants drop out of the program, which left thirty-three participants who attended the T2 measurement. Both groups in T2 thus contained 66 participants, that is 37 % less than in the first measurement time of T1. The participants who dropped out of the study did not significantly differ from others in any of the demographic and control variables, or in the baseline measures. The intervention group participants (M age = 23.73, SD = 2.27) were 63.6% female and 93.9% Caucasian; 33.3 % reported having previous meditative experience; 45.2 % previous managerial or entrepreneurial experience, while 21.2 % reported occasional alcohol or drug use (see Table 1).

Independent sample t-test for age and chi-square tests for (1) sex, (2) nationality, (3) previous experience with meditation, (4) managerial or entrepreneurial experience

Table 1 Comparison of demographic and control variables between RMT and control groups

Characteristic	RMT (N = 33)	Control (N = 33)	Test-statistic	p
Age, mean (SD)	23.73 (2.27)	22.91 (3.64)	t (64)=1.095	0.11
Female (%)	63.6	60.6	$\chi^2(1)=.064$	0.50
Caucasian (%)	93.9	90.1	$\chi^2(1)=3.333$	0.50
Previous meditative experience (%)	33.3	33.3	$\chi^2(1)=.000$	0.60
Managerial or entrepreneurial experience (%)	45.5	24.2	$\chi^2(1)=3.270$	0.06
Drug or alcohol use (%)	21.2	27.3	$\chi^2(1)=.330$	0.39

Note: RMT = Relational Mindfulness Training; p-values indicate significance of differences between RMT and control group

and (5) active consumption of alcohol or drugs, were used to identify any significant differences between experimental and control groups (see Table 1). The only notable difference in managerial or entrepreneurial experience was insignificant on the level of $\alpha \leq .05$, as well as differences in all the other variables.

Measures

Measures used in our study were translated from the original English version to Czech and translated back to English by an independent translator. Both authors, in cooperation with the independent translator, then created the final Czech version of the measures that are described below.

Mindfulness. Participants evaluated their level of mindfulness by using the 15-item Mindful Attention Awareness Scale (MAAS) (Brown & Ryan, 2003). MAAS has been criticized for its unidimensionality and negative statement of the items (Grossman, 2011). On the other hand, unlike the other mindfulness scales (such as FFMQ, KIMS, FMI, CAMS-R or SMQ), the MAAS has repeatedly shown that it is a suitable measure for both experienced and un-experienced mindfulness practitioners and shows good predictive validity (Michalak et al., 2008; Bergomi et al., 2013). This scale is also the most used mindfulness measure in the mindfulness research (Sutcliffe et al., 2016). Participants indicated on the 6-point Likert scale from 1 [almost always] to 6 [almost never] how frequently they had an experience like the one described in each statement. MAAS contains statements, which are focused on daily situations, for example: "I forget a person's name almost as soon as I've been told it for the first time".

Self-Compassion. The level of self-compassion was examined by the Self-Compassion Scale (SCS) (Neff, 2003), which contains 26 items and was successfully used in previous studies (Neff & Germer, 2013; e.g., Shapiro et al., 2007). Participants indicated how they treat themselves in difficult situations by using the 1-5 Likert scale from 1 [almost never] to 5 [almost always]. The item example of SCS is: "When something painful happens I try to take a balanced view of the situation."

Authentic Leadership. Participants evaluated the level of their authentic leadership by responding to a 16-item scale of Authentic Leadership Self-Assessment Questionnaire (ALSAQ) (Northouse, 2013). Participants responded by choosing 1-5 options on the Likert Scale from 1 [strongly disagree] to 5 [strongly agree]. The scale contains statements which focus on the aspects of an authentic leader, e.g.: „I look for feedback to understand what a person I really am.“

Empathic Accuracy. Similarly to Mascaro et al. (2013), empathic accuracy was measured through the Reading Mind in the Eyes Test (RMET) (Baron-Cohen et al.,

2001), a method based on the theory of mind. Participants were instructed to recognize emotional and mental states (by choosing one of four options) from the different pictures of the eye area of different men or women on the screen. The full version of the Reading Mind in the Eyes Test contains 36 pictures. However, according to Baron-Cohen et al. (2001), the only eligible items are those, which have at least 50% successful answers, and have only 25% alternative of the foils. In accordance with this criteria, the final version of the test used in our study contained 23 items.

All the measures proved to have sufficient internal consistency with Cronbach alphas ranging from .71 for the Authentic Leadership Self-Assessment Questionnaire to .89 for the Self-Compassion Scale (see Table 2 for scale reliabilities and correlations). For the Reading Mind in the Eyes Test, Cronbach alpha cannot be counted due to the specific format of the scale (see Baron-Cohen et al., 2001 for details). We also measured test-retest reliability by calculating correlations between control group scale means in T1 and T2. The test-retest reliability was .74 for MAAS, .86 for SCS, .61 for ALSAQ and .68 for RMET.

Table 2 Means, standard deviation, bivariate correlations and scale reliabilities (N = 66)

	M	SD	1	2	3
MAAS	3.9	.61	(.81)		
SCS	2.94	.61	.41**	(.89)	
ALSAS	14.45	1.68	.06	.19	(.71)
RMET	14.47	2.16	.02	-.07	-.08

Note. MAAS = Mindful Attention Awareness Scale; ALSAS = Authentic Leadership Self-Assessment Scale; SCS = Self-Compassion Scale; RMET = Reading Mind in the Eyes Test; ** $p < .01$.

RESULTS AND INTERPRETATION

First of all, we conducted preliminary analyses in order to examine the baseline differences between the active control group and the passive control group. Analysis of the independent sample t-test showed that the active control group and the passive control group showed significant differences for age ($t(45) = -3.257, p = .002, d = -0.46$). Chi-square tests did not show any significant differences between the active control group and the passive control group for any other control variables, that is sex ($X^2(1, N = 47) = 3.85, p = .075$), Caucasian ($X^2(1, N = 47) = 0.18, p = 1.000$), previous experience with meditation ($X^2(1, N = 47) = 2.77, p = .125$), managerial or entrepreneurial experience ($X^2(1, N = 47) = 0.79, p = .517$) and occasional use of alcohol or drugs ($X^2(1, N = 47) = 2.03, p = .193$). In the case of the main variables, the independent sample t-test showed significant differences between both groups for mindfulness ($t(45) = -2.078, p = .044, d = -0.31$). Differences were not significant for self-compassion ($t(45) = -0.961, p = .342, d = -0.14$), authentic leadership ($t(45) = -1.820, p = .076, d = -0.27$) and empathic accuracy ($t(46) = -0.382, p = .705, d = -0.06$).

Secondly, we used paired sample t-test to examine pre/post changes in study outcomes. In the case of the intervention group, the results demonstrated significant differences between baseline and endpoint time for mindfulness (with medium effect size) ($t(32) = -3.198, p = .003, d = -0.56$), self-compassion (with medium effect size) ($t(32) = -3.016, p = .005, d = -0.53$), and authentic leadership (with medium effects size) ($t(32) = -2.991, p = .005, d = -0.52$). However, the growth of the empathic accuracy score in the experimental group, despite the positive result, was not proven as significant (with small effect size) ($t(32) = -1.476, p = .150, d = -0.26$). In the

case of the control group, significant differences were not found for any of the variables (mindfulness ($t(32) = .267, p = .791, d = 0.05$), self-compassion ($t(32) = .095, p = .925, d = 0.02$) authentic leadership ($t(32) = .000, p = 1.000, d = 0$), and empathic accuracy ($t(32) = 1.130, p = .267, d = 0.20$)).

Table 3 Pretest and posttest mean scores of RMT intervention and control group effects analyzed with 2 (Group) x 2 (Time) repeated measures ANOVA, and effect sizes using Cohen's d

	RMT Group (N=33)		Control Group (N=33)		F	Effect size
	Pretest	Posttest	Pretest	Posttest		
Outcome	M (SD)	M (SD)	M (SD)	M (SD)	Time x Group	Cohen's d
Mindfulness	3.80 (.66)	4.19 (.48)	3.99 (.55)	3.97 (.53)	8.472**	.73
Self-Compassion	2.93 (.68)	3.25 (.59)	2.95 (.55)	2.94 (.51)	10.258**	.70
Empathic accuracy	14.39 (1.85)	14.94 (1.97)	14.55 (2.45)	14.06 (3.33)	3.312†	.45
Authentic leadership	14.09 (1.66)	15.13 (1.61)	14.82 (1.65)	14.82 (1.48)	6.006*	.61

Note. RMT = Relational Mindfulness Training; ** $p < .01$, * $p < .05$, † $p < 0.1$

Thirdly, we used the series of 2 (Group) X 2 (Time) mixed ANOVA to determine whether the experimental group demonstrated a significantly greater degree of improvement than the control group, including the effect sizes calculated by examining gain scores with Cohen's d (see Table 3). The results showed a significant interaction effect of group (intervention, control) and time (baseline and endpoint) for mindfulness (with medium effect size) ($F(1, 66) = 8.472, p = .005, d = .73$), self-compassion (with medium effect size) ($F(1, 66) = 10.258, p = .002, d = .70$) and authentic leadership (with medium effect size) ($F(1, 66) = 6.006, p = .017, d = .61$). Improvement was not significant on $\alpha \leq .05$ for empathic accuracy (with medium effect size) ($F(1, 66) = 3.312, p = .073, d = .45$).

DISCUSSION

We conducted a study on the sample of 66 management students in order to assess the effects of Relational Mindfulness Training (RMT) on mindfulness (Hypothesis 1), self-compassion (Hypothesis 2), authentic leadership (Hypothesis 3) and empathic accuracy (Hypothesis 4). Our results showed a significant positive effect of RMT on mindfulness, authentic leadership and self-compassion. Therefore we found support for Hypotheses 1, 2 and 3. We did not find support for the significant effects of RMT participation on empathic accuracy (Hypothesis 4).

To put our findings into the context of the other conducted studies, we report the comparison of our effects with previous studies that primarily focused on the development of mindfulness and self-compassion. Firstly, the participation in RMT led to the .39 mean increase of mindfulness. Four studies carried out on the MBSR (Jensen et al., 2012; Klatt et al., 2009; Shapiro et al., 2007, 2011) yielded an average .45 increase of mindfulness, while the four MBCT studies (De Raedt, 2012; O'Doherty et al., 2015; Perich et al., 2013; Shahar et al., 2010;) showed a .26 increase. These comparisons suggest RMT be similarly effective in the development of mindfulness as classic mindfulness interventions, and as such to be a valid approach for the development of mindfulness. Secondly, participation in RMT led to a .32 mean increase of the self-

compassion. In comparison with the RMT group, four studies that were done on the MBSR (Shapiro et al., 2005, 2007, 2011; Frank et al., 2013) showed an average increase of .44 on the self-compassion, while two studies on the MBCT (Kuyken et al., 2010; Lee & Bang, 2010) showed a .34 increase in the self-compassion. Results show RMT to be similarly effective for self-compassion development as MBCT. However, it is slightly less effective than MBSR.

Our study also proved the existence of a significant positive relationship between RMT participation and authentic leadership. However, we did not find any study with which we could compare our results, but we found support for the assumptions about the beneficial role of mindfulness in the development of authentic leadership skills (Goleman, 2013; Leroy et al., 2013). Finally, we predicted the positive impact of RMT participation on empathic accuracy. Our study (with the exception of Mascaro et al., 2013) seems to be the first study that examined the effects of mindfulness training on empathic accuracy. However, in comparison with the control group, the analysis showed that this effect was not significant on $\alpha \leq .05$. Nevertheless, the value $p = .073$ suggests that this relationship might prove to be significant in the case of the future studies with larger samples.

Limitations and Future Directions

We recognize the main limitation in the fact that our study was not fully blinded in the case of both experimenter and respondents. Our results might have been biased by the experimenter effect because the facilitator of RMT and the alternative career development course is also the first author of this study. We did not provide participants with any information about the purpose of research, examined variables or expectations of their possible progress. However, we admit that especially the participants who reported previous meditative experience might have guessed that aim of our study was to examine the possible positive outcomes of the participation in RMT.

Our study was also not fully randomized, because the participants of the active control group were included in the study after the randomization between the RMT group and the passive control group. This setting might have caused the non-equivalence between the experimental and the control group regarding the interest in mindfulness. However, we would like to stress that first of all, all study participants expressed their initial interest in personal development and participated on a fully voluntary basis. Second of all, the initial analysis of the control variable "previous experience with mindfulness or meditation" did not show any significant differences neither between the experimental and control groups ($p = 0.60$) nor between the passive and active control groups ($p = 0.13$). More specifically, 33.3 % students reported previous experience with mindfulness or meditation in the case of both experimental and the control group. Furthermore, in the case of the control group, notably more members reported previous experience with mindfulness or meditation in the case of the active control group (43,5 %) as opposed to the passive control group (20.9 %). These results, therefore, suggest that participants of the active control group who could be supposed as the least interested in the mindfulness practice actually showed higher (despite not significant) initial experience with mindfulness it. Finally, the 2 (Time) x 2 (Group) mixed ANOVA also did not show any significant differences between the active and passive control groups after the end of the intervention. These results, therefore, suggest that non-equivalence is not a major issue in this case.

We recognize another limitation in the fact that our study dominantly relied on self-report questionnaires. This is particularly the case of the Mindful Attention Awareness Scale (MAAS) that tends to be criticized for the negative statement of items and the

unidimensionality (Bergomi et al., 2013; Grossman, 2011). However, as we already stated, using of MAAS is advantageous due to the fact that it is appropriate for un-experienced mindfulness practitioners and shows good predictive validity (Bergomi et al., 2013; Michalak et al., 2008; Sutcliffe et al., 2016). Therefore, although the MAAS does not provide such a complex examination of mindfulness as other mindfulness scales, we assume that it is the best choice for the research that is conducted on the students who are more likely inexperienced practitioners. The limitation of reliance on the self-report questionnaires was also partially compensated by the fact that the Reading Mind in Eyes Test (RMET) was included in the Study.

Contribution to Mindfulness Research and Implications for Academic and Organizational Settings

Our study is among the first ones to explore the effects of relational mindfulness. It shows that it is possible to successfully conduct an 8-week training that is dominantly based on the relational mindfulness practice. RMT differs from existing MBIs by its intensive use of dyadic, triadic and group interactions between participants who develop the understanding of the three domains of relational practice (self-in-relationship, other-in-relationship and relationship-in-relationship).

The design of our study did not allow examination of the pure effects of the relational mindfulness. However, our findings showed the significant effect of RMT participation on authentic leadership. This relationship-focused variable provides first pioneering evidence for the RMT as the intervention that possibly supports the healthy development of interpersonal relationships. Our findings also revealed highly significant effects on individual-focused variables mindfulness and self-compassion. Comparison with MBSR and MBCT also suggested that RMT is the similarly efficient intervention in terms of the development of those variables, despite to the fact that notably fewer hours are dedicated to the individual practice in the RMT curriculum (8 hours out of total 22 hours). These findings suggest that the practice of relational mindfulness either increases individual-focused outcomes directly through the relational interaction or indirectly through making the individual mindfulness practice more efficient. The former option would suggest that the practice of relational mindfulness is similarly efficient as individual meditations in terms of the development of mindfulness and self-compassion and represents a promising indicator for further implementation of mindfulness in organizational settings, where members usually require more vivid form of mindfulness practice and do not possess enough time for meditations (Falb & Pargament, 2012; Good et al., 2016).

The latter option would support the suggestions that individual and relational mindfulness practices are compatible (Hanh, 2014; Surrey & Kramer, 2013). This compatibility seems to help participants to better understand, and anchor, their individual practice, as they receive feedback from their colleagues. The effort and time spent with individual practice create a platform for the participants' shared experience, mutual sharing of the feelings and development of trust in the group.

Our study also showed that RMT is a suitable and eligible intervention for management education. We decided to examine the RMT in management education because it tends to be criticized for being selfish or even immoral. We expect that RMT could be suitably applied to higher education curriculum in most of the contemporary universities. We also suggest RMT be suitable for contemporary organizations and we expect that it might show similar effects as this study. However, there might be a strong demand to offer an abbreviated form of RMT because organizations tend to provide less time for the development of mindfulness (Good et al., 2016). Although this adaptation

might be compensated by further development of supportive materials, it is reasonable to expect that abbreviated forms would show weaker effects than full forms. We do not expect that RMT would be primarily suitable for the clinical environment and the major modifications might be necessary depending on the specificities of the clinical situation. Empirical evidence might shed more light on this domain in the future. We would also like to mention, that similarly to other MBIs (Kabat-Zinn, 2003), the participation in the RMT is suitable only for those participants who are willing to engage in the self-development practice.

CONCLUSION

We conducted this study on a sample of 66 management students to explore the effects of mindfulness training in the relational context. In order to bring this practice closer to academic and business setting, we developed an 8-week Relational Mindfulness Training (RMT) program. Our study was among the first ones to validate effects of a Mindfulness-Based Intervention (MBI) that focuses primarily on relational practice and the first one to examine the effects of MBI in the Czech Republic overall. Our results show support for the positive effects of RMT participation on mindfulness, self-compassion and authentic leadership. Comparison with other mindfulness-based interventions suggests that RMT is a similarly efficient intervention in terms of the development of mindfulness and self-compassion and shows that our study contributes to the less explored developments in authentic leadership and empathic accuracy. The results suggest that RMT participation gives management students the practical tools necessary for being more aware and caring with regard to others and themselves, and as such being potentially better prepared for coping with complex social interactions in both their professional and personal lives.

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SOURHN

Rozvoj všímavosti v kontextu mezilidských vztahů: Vytvoření a ověření programu Relational Mindfulness Training (RMT)

Cíle. Aplikace všímavosti na pracovišti zaznamenala zvýšenou poptávku v posledních letech. Tento rozvíjející se obor však zaznamenává nové výzvy, které souvisí především s potřebou respektovat dynamické podmínky současných organizací a vnést praxi všímavosti do mezilidských interakcí. Autoři proto vytvořili Relational Mindfulness Training (RMT), osmitýdenní intervenci založenou na všímavosti, aby podpořili výzkum v oblasti všímavosti ve vztazích.

Metoda. Studie zkoumala efekty RMT na souboru 66 studentů. První měření (T1) proběhlo jeden týden před zahájením intervence, druhé měření (T2) proběhlo jeden týden po skončení intervence.

Hypotézy. Autoři předpokládali, že účast v RMT bude mít pozitivní signifikantní vliv na úroveň všímavosti, sebe-laskavosti, autentického leadershipu a empatické přesnosti.

Statistická analýza. Analýza rozptylu byla využita pro porovnání kontrolní a experimentální skupiny mezi časy T1 a T2. Párové t-testy byly využity pro analýzu efektů mezi T1 a T2 uvnitř obou skupin.

Výsledky. Výsledky naznačují, že výcvik ve vztahové všímavosti může pomoci zlepšit osnovy manažerských oborů. Účast v RMT vykázala signifikantní pozitivní efekt na úroveň všímavosti, sebe-laskavosti a autentického leadershipu. Dle informací autorů je tato studie první, která ověřuje efekty intervence založené na vztahové všímavosti v manažerském vzdělávání a také první, která ověřuje efekty intervence založené na všímavosti v České republice.

Limity. Většina proměnných v této studii byla měřena pomocí sebehodnotících dotazníkových metod, v rámci této studie však byly využity nejběžnější metody z oboru všímavosti. Studie také nebyla double-blinded a díky tomu mohlo v rámci studie dojít ke zkreslení vlivem placebo efektu či efektu experimentátora.